States want VoIP But first they need to get the underlying infrastructure in place. PAGE 8.

What's next for Qwest? Spurned by MCI, the carrier readies its next move. PAGE 10.

NetworkWorld

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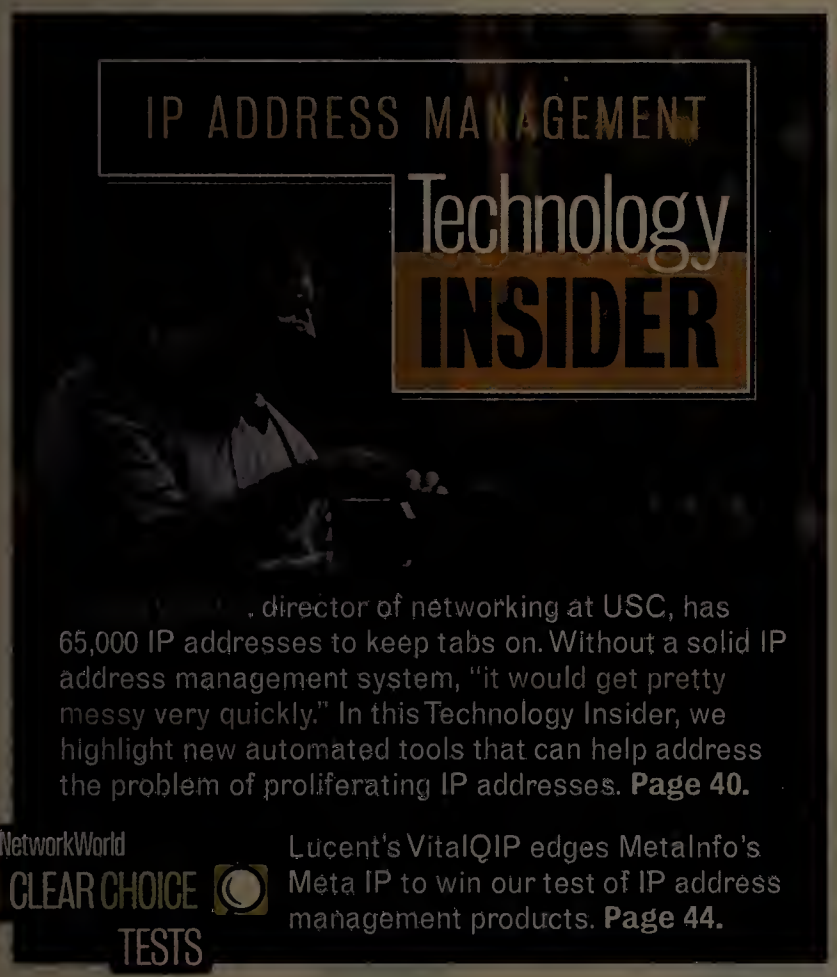
May 9, 2005 ■ Volume 22, Number 18



, director of networking at USC, has 65,000 IP addresses to keep tabs on. Without a solid IP address management system, "it would get pretty messy very quickly." In this Technology Insider, we highlight new automated tools that can help address the problem of proliferating IP addresses. **Page 40.**

NetworkWorld CLEAR CHOICE TESTS

Lucent's VitalQIP edges MetaInfo's Meta IP to win our test of IP address management products. **Page 44.**

PHOTO: MARK HARMEL

Cisco, Juniper joust over net blueprints

Enlivened Interop also focuses on security, wireless.

■ BY PHIL HOCHMUTH AND DENISE DUBIE

LAS VEGAS — A smaller venue and larger turnout last week helped infuse Interop 2005 with long-absent excitement about the network industry.

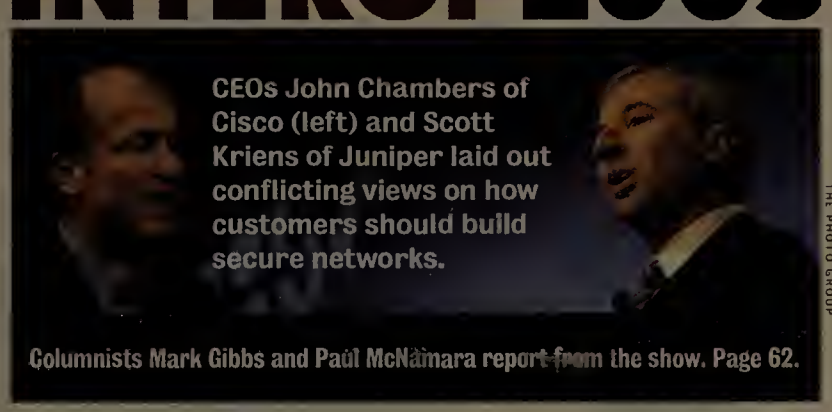
The event drew 17,000 attendees and featured a ton of wireless and security products, as well as news that a second show — Interop Fall 2005 — will be coming in December to the Jacob Javits Center in New York.

The conference featured keynote addresses on back-to-back days by Cisco CEO John Chambers and his counterpart at rival Juniper. They laid out distinct paths users can choose when building secure, wired and wireless corporate networks: one-stop-shop vs. multi-vendor.

Chambers emphasized that businesses are looking for vendors to act as strategic partners, rather than buying individual, task-oriented products from a gang of companies. Products that can offer lots of things in one box, or a vendor with many different

See Interop, page 12

INTEROP2005



CEOs John Chambers of Cisco (left) and Scott Kriens of Juniper laid out conflicting views on how customers should build secure networks.

THE PHOTO GROUP

Columnists Mark Gibbs and Paul McNamara report from the show. Page 62.

HP readies storage push aimed at reversing slide

■ BY DENI CONNOR

HP next week is set to revitalize its storage family with the introduction of a slew of products designed to give customers more flexibility in storing data center and remote-office information.

The company says the announcements will constitute its most important storage launch ever and signal that it is ready to erase its mistakes of the past. HP saw its market share slip last year, to put it in the No. 2 position.

HP's StorageWorks disk storage business accounted for almost $7.6 billion in revenue in 2004, according to IDC. But HP's storage

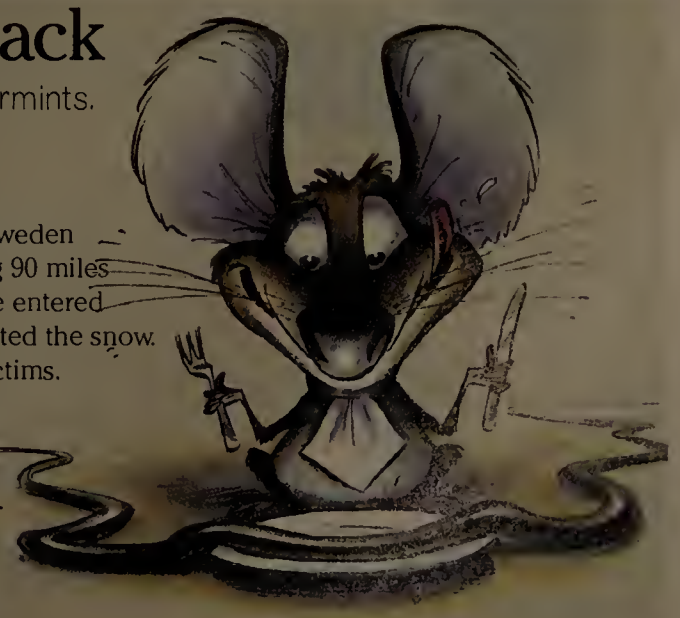
See HP, page 59

A Wider Net

When animals attack

Networks pay the tab for voracious varmints.

■ BY BOB BROWN AND JOHAN BOSTROM



The crime scenes last February in rural Sweden looked remarkably similar despite being 90 miles apart. The perpetrators appeared to have entered through the smallest of cracks. Footprints dotted the snow. Each case claimed more than a thousand victims.

And then, there were the telltale teeth marks.

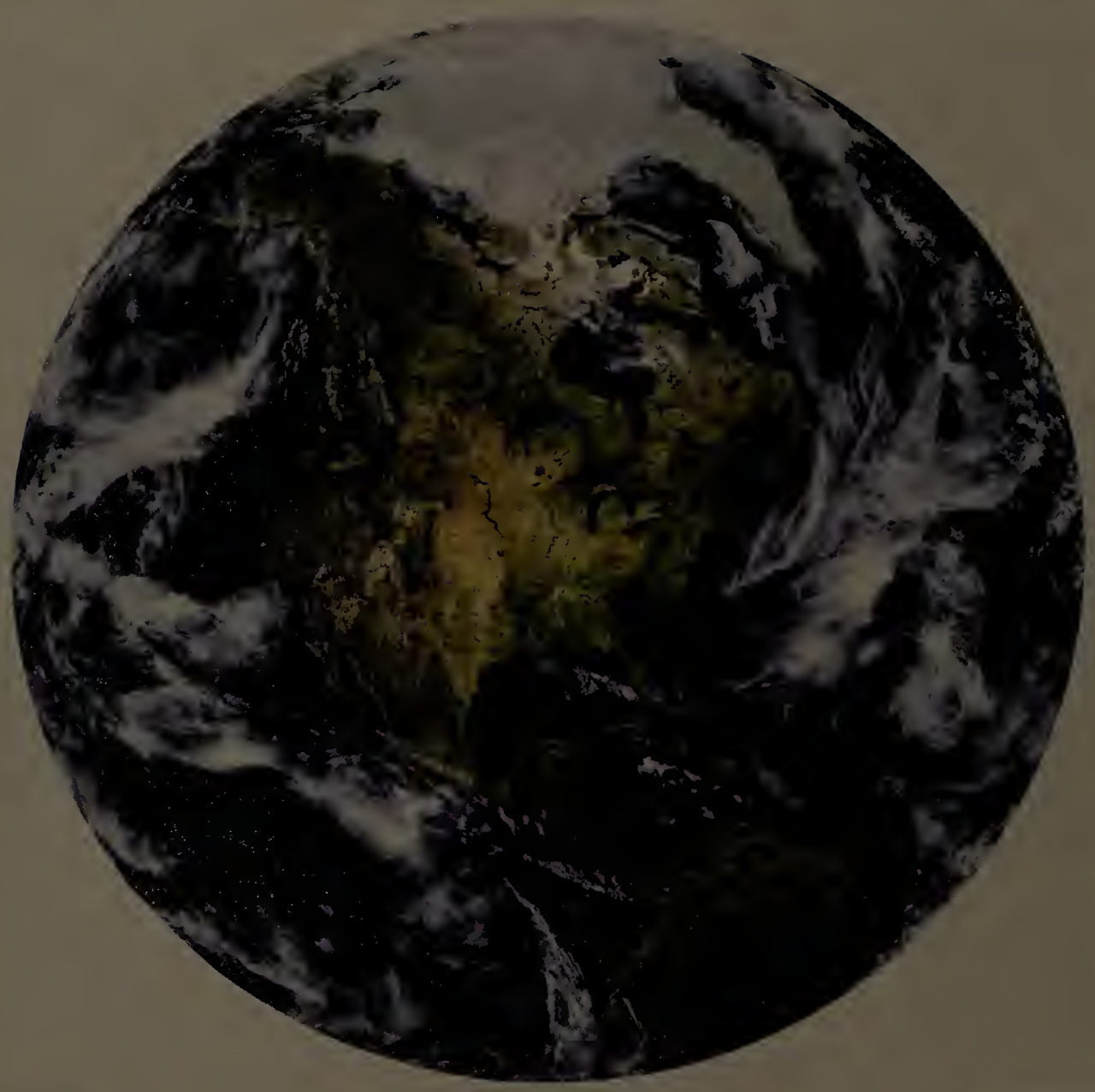
No doubt about it: Field mice had done the dirty deeds.

TeliaSonera, a Stockholm telecom carrier, suffered two nearly daylong network outages that caused roughly 4,000 wireline and wireless

See Interop, page 16

DAN VASCONCELLOS

64



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Stream video via the Web with D-Link's SecuriCam Internet Camera. Page 36.

Technology INSIDER

The University of Southern California has 65,000 IP addresses, and if Director of Networking James Wiedel, right, wasn't paying close attention "it would get pretty messy very quickly." In this Technology Insider, we highlight new automated tools that can help address the problem of proliferating IP addresses. **Page 40.**

CLEAR CHOICE TEST

Lucent's VitalQIP edges MetaInfo's Meta IP to win our test of IP address management products. **Page 44.**

PHOTO: MARK HA

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Network World Radio: Live from Interop 2005

We hit the road to Sin City to talk with Tandberg about the video portion of the interop show network, and share some frustrations about vague vendor demos and delayed downloads. **DocFinder: 7039**

Web conferencing Buyer's Guide

If Web conferencing software is on your to-buy list, head to our updated Buyer's Guide, where you can find the specifics on offerings from more than 30 vendors. **DocFinder: 7040**

Network Life: Spotlight on home network security

Keeping home networks free from viruses, bugs, spyware and worms isn't easy. The latest edition of *Network Life* offers strategies on securing your home network; 10 ways to stop spyware; tests of a WLAN security system and a WLAN extender; and more. **DocFinder: 6451**

Seminars and Events

Wireless & Mobility: Commanding Broadband Everywhere

Just when technology solves the complexities of anytime-anywhere wireless broadband, companies are suddenly paralyzed by uncertainty about their own wireless networks. Which devices? Which apps? And why? Find out first at this free Tech Tour event. **DocFinder: 7045**

Online help and advice

Nutter's Help Desk

Best way to handle DNS

Help Desk guru Ron Nutter offers suggestions to a reader who asks: "In doing a check of our DNS servers recently, I was surprised to find that they would resolve requests that weren't coming from our network. How can we still allow for our internal network to resolve outside systems but control what can be done from the outside world?" **DocFinder: 7041**

Home Base

Punch the clock

Columnist Sandra Gittlen says charging by the hour requires sharp time-tracking skills, so she offers advice on how to cultivate them. **DocFinder: 7042**

Small-Business Tech

IM tricks keep coming

Columnist James Gaskin looks at the issue of enterprise instant-messaging use and security, and offers suggestions on options for encrypting instant messages. **DocFinder: 7043**

Compendium

Even experts get viruses

Executive Online Editor Adam Gaffin says you shouldn't feel bad if you get hit: "Darren Miller, a network security consultant with DefendingTheNet.com and ParaLogic, describes how he fell for a particularly specialized attack." **DocFinder: 7044**

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News Bits

IBM set to slash 13,000 jobs

■ After reporting less than rousing first-quarter financials, IBM executives last week detailed a series of restructuring moves — including the loss of between 10,000 and 13,000 jobs — aimed at reducing bureaucracy and improving operating efficiency. Most of the job cuts — which may reduce spending by $300 million to $500 million in the second half of the year — will come from IBM's European operations, where the company expects to eliminate a layer of upper management and push greater decision-making power to client-facing staff. Another initiative pertains to IBM's Global Services business. IBM will work to improve the efficiency of its services operations by standardizing job roles, processes and tools, and consolidating service delivery workloads into fewer locations, called "integrated delivery centers," IBM says. The cuts are IBM's biggest round of layoffs since 15,600 jobs were cut in 2002 after five straight quarterly-sales declines. CEO Sam Palmisano last month said the top 50 managers would not receive pay increases after the company's first-quarter sales grew 3%, to $22.9 billion, the slowest pace in 10 quarters.

Sun makes overseas moves

■ Sun is scaling back its Silicon Valley engineering group and expanding its facilities around the world to save on costs. The company said last week it would grow facilities in Bangalore, Beijing, St. Petersburg and Prague. Published reports said Sun isn't pulling out of Santa Clara but won't be hiring much more there for the time being. The ability to quickly hire large numbers of programmers in India and other low-cost locations justified the company's plan to combine its worldwide research staff in those places, Sun says. Sun recently said it would outsource its internal information technology team to Computer Sciences Corp. in a contract worth $360 million. The company has reduced its staff to about 30,000, from about 43,000 four years ago.

FCC denies SBC plan

■ The FCC last week denied SBC's petition to exempt new Internet-based services from traditional telephone regulations. The petition sought to isolate SBC's new Internet networks, such as the fiber optic Project Lightspeed for consumer IPTV, from policies that provide competitors access to that infrastructure at wholesale prices. The FCC voted 4-0 to reject the petition. SBC expects the FCC to eventually rule in favor of the RBOC and its peers: "We are confident that the FCC will decide conclusively in favor of investment and deployment in broadband networks to bring innovation, competitive choice and value to consumers," said James Smith, SBC senior vice president for FCC issues, in a statement.

COMPENDIUM

Snail mail

Israeli researchers have proved that snails can move data faster than the average DSL line — provided you're talking about Giant African Snails attached to "chariots" in which the wheels consist of DVDs laden with data. Alas, the technique is only useful over very short distances. ***Get information quick every week at Compendium. www.networkworld.com, DocFinder: 7051.***

TheGoodTheBadTheUgly

Microsoft's blog bid. Revving its Longhorn marketing engine, Microsoft is forming a team of bloggers who will get early access to prereleases of the operating system and will be asked to review the Windows XP successor. "They'll tell us where we're screwing up, what we're doing well, and will be the world's top authorities on Longhorn," Microsoft Longhorn Evangelist and blogger Robert Scoble wrote.

Egenera staying private. Blade server pioneer Egenera has withdrawn its filing for an IPO, citing market conditions. In early 2004, when the filing was made, the market seemed to be on an upswing. "But right around the time that we filed, the market went south on us again and has been going sideways at best since then," says Tom Sheehan, Egenera's CFO. The decision to pull the IPO came just days after the company announced that it had received $45 million in new funding.

E-mail goes to pot. A new study conducted at King's College London found that juggling e-mail and working at the same time caused people's IQ to fall during the day as much as it would if they missed a night's sleep and more than twice as much as it would if they had smoked pot. ▼

Gore gets his Internet due

■ Maybe he didn't invent the Internet, but after all, he made some serious contributions to its success. That seems to be the thought behind the International Academy of Digital Arts and Sciences' decision to present former Vice President Al Gore with a Webby lifetime achievement award. Vint Cerf, one of the Internet's key inventors, will give Gore the award at a June 6 ceremony in New York. The group says Gore while in Congress promoted high-speed telecommunications for economic growth and supported funding increases for the then-fledging network. Gore has been roundly ridiculed for a 1999 CNN interview where he said he "took the initiative in creating the Internet." Gore is widely credited for popularizing the term "information superhighway."

FCC-backed 911 plan on tap for VoIP providers?

■ Published reports last week indicated the Federal Communications Commission might require Internet-based telephone companies to offer 911 emergency services by as early as the end of September. The proposal would require companies such as Vonage to route 911 calls directly to primary emergency lines within four months of the order being issued. The proposal could be voted on as soon as the agency's next open meeting May 19. How the FCC would enforce such as statute remains unclear. Vonage, which has arrangements with Verizon and others to handle 911 calls, has been sued by Texas and Connecticut, where customers had trouble reaching 911.

States want VoIP, lack infrastructure

Policies and network upgrades needed to support the technology, say state CIOs.

■ BY TIM GREENE

BURLINGTON, Vt. — Demand for VoIP in state government is high, but states are slow to adopt it because they first need to install infrastructure that supports the technology.

Corporations that acquire other businesses face the task of unifying networks. Statewide IT officials are placed in a similar situation and have to deal with integrating separate department networks that were created with no overarching architecture or standards in place, according to many state IT officials at last week's Northeast regional meeting of the National Association of State Telecommunications Directors (NASTD).

Vermont is one of the few states without this problem because it currently uses carrier-based Centrex service for all departments. It is upgrading its data WAN to support IP voice, said Christopher Campbell, deputy commissioner of the Department of Information and Innovation.

"We're improving the WAN to do VoIP with quality of service," Campbell said. "We're keeping a very, very open mind." The state hopes bids for statewide phone services — when the current contract expires in two years — will attract proposals for VoIP, but the technology won't be prescribed in the RFP, he said.

Other states say they still are working on statewide WAN/LAN architectures that will make VoIP feasible both within and between departments. NASTD has an enterprise architecture-working group, where members swap ideas on how to better unify state networks. Upgrades could include LANs that support virtual LAN (VLAN) and Power over Ethernet and WANs that support traffic-shaping and QoS.

IP PBXs abound

Meanwhile, in states without clear VoIP policies, installations of IP PBXs pop up because they meet the immediate needs of individual agencies. For example, in West Virginia, three departments use three different vendors because there is no overriding plan or standard for which vendor to use, said Carlos Neccuzi, IS specialist in the Department of Administration.

The state police use Nortel IP VoIP gear to connect more than 70 offices, some of which go unstaffed during parts of the day. The system is used to divert calls to offices where someone is on duty to answer. Similarly, the state's department of highways has installed a Cisco IP PBX in its headquarters building and plans to extend the VoIP network to 10 district headquarters buildings.

Neccuzi's own department has IP phones with a Toshiba system that was purchased to connect two offices by phone that were already connected by a data line. "We didn't set out to do VoIP and ended up with a few phones anyway," he said.

VoIP appears most often in facilities that are new because departments can readily install data networks that support VoIP at the outset. Maine has installed VoIP at a psychiatric center in Augusta and in the state's new Public Safety office to handle emergency management services in case of disasters, said Ellen Lee, the state's director of network services in the Department of Administrative and Financial Services.

In both cases, VoIP was chosen because the facilities were new, so the network was being built from scratch and could be designed to support the QoS needed for VoIP. As of this point, the state only uses VoIP within departments, not over the WAN, Lee said.

Virginia's Department of Social Services and Department of Health both needed phone systems on short notice when they moved into new facilities. They bought Cisco IP phone systems because Cisco was an approved vendor they could buy from quickly, and no vendors of traditional PBXs were approved, said Ann Hardwick, associate director of Virginia Information Technologies Agency.

Pennsylvania has no sanctioned VoIP, because a statewide policy specifically forbids it and there is a mandate to use Centrex in all metropolitan areas. But agencies are challenging the policy because they want VoIP, said Valerie Long, the state's network support services manager in the governor's office of administration. "It's our own fault because we don't have a VoIP policy that's been bought into by upper management," she said.

Long said the state is looking into pilot VoIP programs that would include IP PBXs, as well as VoIP service from a carrier. The trials would be with a state agency that already had the network infrastructure to support the technology without an upgrade, she said.

Maine has to upgrade its infrastructure to support VoIP and map a plan. "The infrastructure needs to be there and solid first," Lee said. When that will happen is uncertain because the state has not written a VoIP strategy.

Needs convincing

Some states are unconvinced of VoIP's benefits. In New York, agencies can buy network and telephony services from the state's Office for Technology. But so far VoIP is not a service the office offers, even though the demand is high, said Daniel Corcoran, director of the office's division of telecommunications.

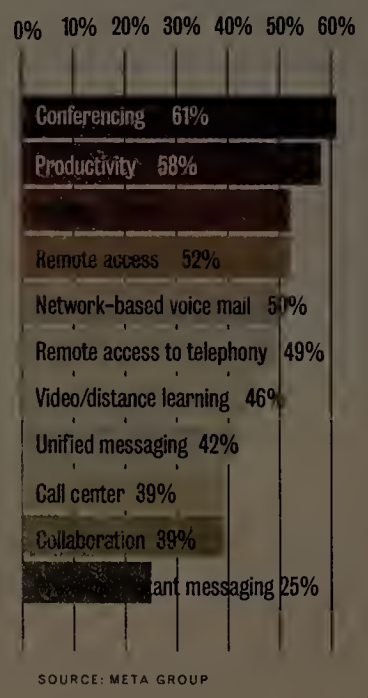
With all the state's current PBXs at least IP-enabled, the office looks for opportunities to link them via IP as a way to save operational costs, he said. But some agencies demand those savings be passed along to them, something his department has not worked out yet. He said he's not sure there will be large savings, if any at all.

"We have a sound rationale for not jumping into this," Corcoran said. He is looking for agencies to demonstrate a need for VoIP based on its ability to support services that traditional phones can't, but so far they haven't come up with any. "We're getting enormous pressure to do VoIP and we keep asking, 'Why?'" ■

VoIP drivers

IT pros were asked to indicate which applications are or will drive their convergence initiatives.

(multiple responses allowed)



SOURCE: META GROUP

CIOs voice cyberterrorism worries

State CIOs say their No. 1 concern is cyberterrorism and that the federal government isn't paying enough attention to it.

"It's a serious issue and becoming a lesser issue for the feds," said Thomas Jarrett, president of the National Association of State CIOs (NASCIO). "They seem to want to focus on the 'boots and suits' approach to national security."

His remarks came at the Northeast regional meeting of the National Association of State Telecommunications Directors, which includes state IT executives, as well.

About half of NASCIO's members spent last Wednesday on Capitol Hill leafleting their representatives with their list of priorities, topped by the need for technology to block malicious exploits.

Shoring up state networks with anti-virus, intrusion-detection/prevention and other security gear has to contend with other demands on government, Jarrett said. The absence of a disastrous cyberattack to date makes it difficult to generate support. "If it's healthcare vs. some new boxes I want to put in, I can tell you what's going to win," he said.

Jarrett, who is CIO for Delaware, said IT departments in his state log 2,000 virus and spyware attempts per day.

The funding problem is complicated by the fact that state CIOs are generally appointed by the governor, and that when a new governor is elected, a new CIO is appointed. This makes continuity difficult.

"It ought to be a cabinet-level position because we need a seat at the table, but it's caught up in a lot of politics," Jarrett said. "We need processes that aren't so tied to the person at the top."

With CIOs changing fairly frequently, setting priorities and keeping up pressure for funding is a constant struggle. Jarrett said he is the second-longest serving of state CIOs at three and a half years. Because of seven new governorships, seven state CIOs have been replaced since November, and another six CIO slots are vacant, Jarrett said.

The job is also plagued by mid-term defections. "CIOs come in with outstanding ideas only to become frustrated by the political process," he said.

—Tim Greene

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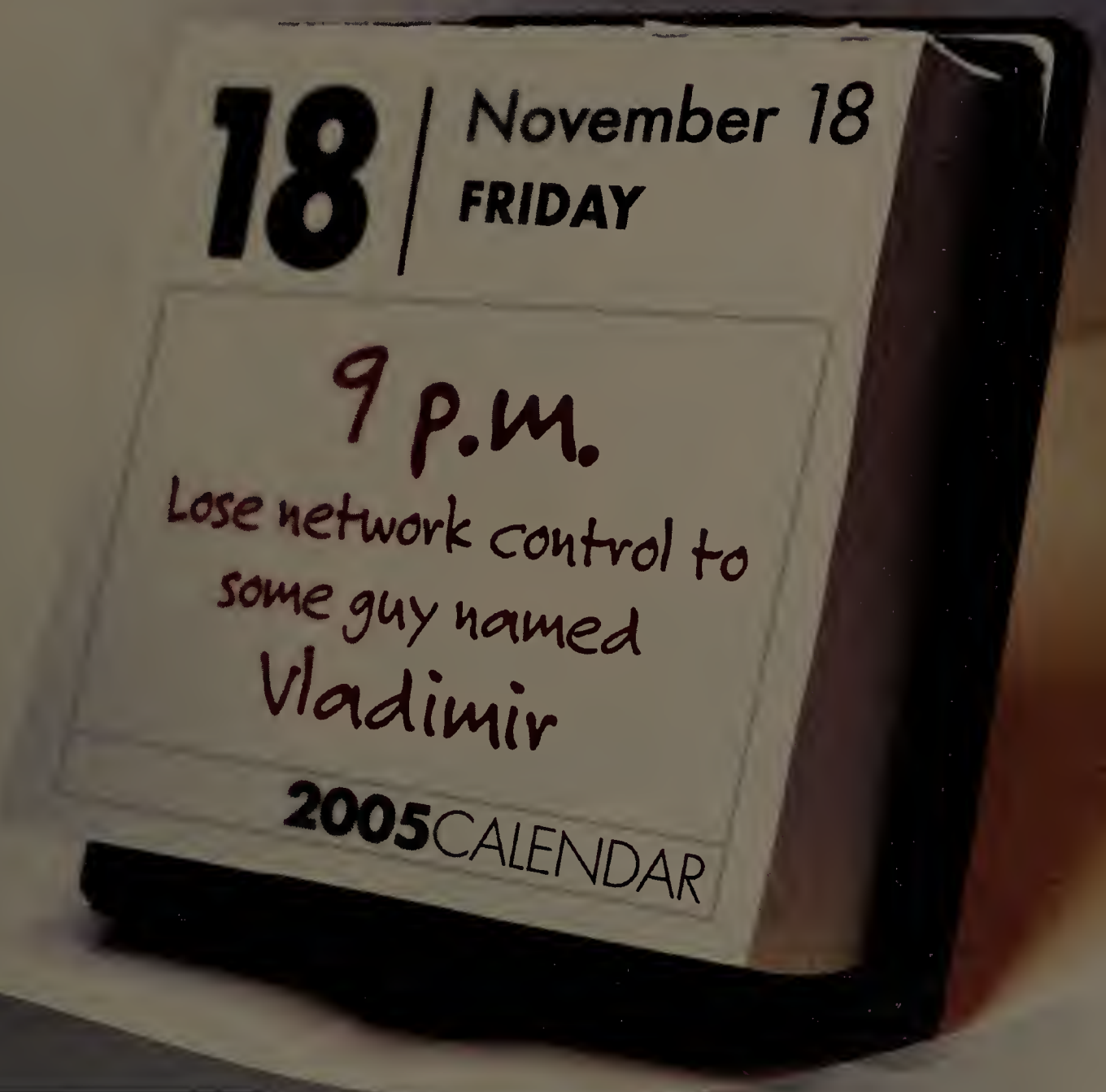

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Qwest moves on after MCI rejection

■ BY JIM DUFFY

Having lost the auction for MCI last week, despite bidding more than Verizon, Qwest now faces a future as telecom's ugly stepchild.

Not only will it have to compete against the two new megacarriers — Verizon/MCI and SBC/AT&T — but it also will have to do so with $15 billion in debt, the least attractive region of any of the RBOCs, and little presence in hot growth markets such as wireless.

"They have showed their cards, and since they lost the game they are in a weakened position," says David Rohde, a consultant with TechCaliber, a company that advises companies on contractual dealings with carriers. "The financial situation that they're in trumps everything."

It certainly trumped the deal for MCI. Qwest made four offers for the interexchange carrier, all higher than Verizon's bids and all turned down because of the carrier's uncertain finances after 2002's alleged accounting fraud. MCI ultimately stated that some of its largest enterprise customers would seek to end their contracts with the carrier should it choose Qwest's $9.9 billion offer over Verizon's $8.5 billion bid.

Despite the snub, Qwest remains encouraged, especially after reporting its first profitable quarter after five consecutive losing quarters. CEO Richard Notebaert says the carrier is "aggressively" pursuing other opportunities to drive future growth.

"We have a number of strong options before us," Notebaert said during a conference call to discuss the first quarter results. "We've already begun looking at those options in earnest."

He would not elaborate on what those options are, but said they might include picking up some of the assets divested by SBC/AT&T and Verizon/MCI as they integrate their operations under the watchful eye of the Securities and Exchange Commission and other regulators.

"We'd be very open to that," Notebaert said, adding that Qwest is looking at how it can create a "meaningful third leg" to the SBC/AT&T and Verizon/MCI mega marriages. "It's a good opportunity for us."

Another opportunity, according to analysts, is a three-way combination of Qwest, Sprint and BellSouth. Qwest already has arrangements with both: It resells Sprint's Sprint PCS wireless service and provides out-of-region, long-distance facilities for BellSouth.

For Qwest, this possibility would provide it with a credible wireless presence — Sprint is acquiring Nextel to become the third-largest wireless operator in the U.S., behind Cingular and Verizon Wireless — and expand its local access reach into BellSouth's nine-state region in the Southeast.

"What this is really all about is that third supercarrier," says Thomas Nolle, president of consultancy CIMI. "I don't think Qwest and Sprint by themselves would be strong enough to be the third supercarrier, which means the BellSouth deal would have to be made."

Sprint, however, is busy working out its $36 billion deal for Nextel, so it's not likely to make a run at Qwest. Even if it did not have its hands full with Nextel, Qwest — with its rural, Rocky Mountain territory and huge debt — would not add much to Sprint.

And Sprint's $33 billion market capitalization might make it too pricey for Qwest, whose own market cap stands at about $7 billion.

Another possibility is for Qwest to size up Level 3 Communications to improve its nationwide assets, Nolle says. Level 3 is considered to have one of the most advanced IP/Multi-protocol Label Switching networks in the world, and last summer it landed a huge IP VPN deal with Sears, Roebuck & Co., through reseller Computer Sciences (www.networkworld.com, DocFinder: 7050)

"We have a number of strong options before us. We've already begun looking at those options in earnest."

Richard Notebaert
CEO, Qwest

In any event, Qwest is not likely to compete effectively in a rapidly consolidating industry on its own.

"Ultimately, Qwest needs to marry somebody with some strength, and BellSouth is one of the only players left that they could form a good, credible basis for the third supercarrier," Nolle says.

Others feel Qwest might make a move for a smaller carrier with nationwide facilities, a focus on enterprise customers and little debt, like one that has emerged from Chapter 11 bankruptcy. A handful of carriers fit that profile.

"The U.S. holdings of Global Crossing still have some long-distance voice and frame relay services; Broadwing is another that has come out of Chapter 11," as has XO Communications, says Jay Pultz, vice president and distinguished analyst at Gartner.

Both Pultz and TechCaliber's Rohde caution Qwest business customers to be cognizant of the possibility that the carrier might sell off some assets or exit regions as it acquires, is acquired or otherwise morphs itself into a more viable competitor in the new telecom landscape.

In doing so, another option for Qwest is to unite with a foreign carrier looking to expand its presence in the U.S., Pultz notes. Still another is linkage with a cable multi-system operator (MSO).

Cable MSOs have been taking residential voice lines from RBOCs by offering VoIP on top of their broadband cable modem service. And RBOCs have begun offering video services to counter the incursions cable MSOs have made into their territories.

But cable companies lack a large enterprise presence, the kind of presence SBC gained by acquiring AT&T and Verizon wins by landing MCI. Even though Qwest does not have the cadre of large enterprise accounts that AT&T or MCI has, it has a few that could help a MSO gain entry into that market. It also has the long-distance facilities a MSO might desire.

"One of the things that cable companies have been talking about is, 'Yes, we want to get into that [business] market, we want to serve [small to midsize businesses],'" says Will Stofega, an analyst at IDC. "And [MSOs] have that content to offer up into the Qwest market."

Whichever direction Qwest takes, the company is buoyed by its most recent quarterly results, which saw a net profit after five consecutive quarterly losses. Ironically, the profit is because of the $418 million sale of Qwest's wireless licenses and assets to Verizon Wireless.

"Our first quarter results demonstrate that our strategies are working," Notebaert said during the conference call. "It bodes well for the full year." ■

Madge targets WLAN access

■ BY JOHN COX

Token-ring war-horse Madge this month continues its bid to reinvent itself as an enterprise wireless LAN supplier, with the release of a branch office version of its access-control device.

The company is pricing its Enterprise Access Server (EAS) 100 aggressively, at $900. Rival products from companies such as Aruba Wireless Networks and Bluesocket cost considerably more.

The EAS 100 is intended to secure and manage about 100 users on up to five access points, either Madge's own, or via SNMP, a range of third-party products. Management of a multi-vendor WLAN infrastructure has been a key marketing message for Madge. Users will have to weigh the trade-offs of a standards-based approach compared with the possibly more sophisticated management with proprietary, single-vendor WLANs.

For years, Madge focused on and became a leader in token-ring LAN hardware. But in 2003, a management buyout took the company private. Last year, Madge raised about $3.8 million in a funding round led by venture capital firm Sigma Technology Group.

The cash served as fuel for faster WLAN product development and expanded marketing and sales efforts. Madge cut a U.S. distribution deal with Ingram Micro and began signing up resellers. The company introduced dual-radio access points, high-end and midrange versions of the EAS, and the WLAN Probe Monitor.

As with its earlier WLAN controllers, Madge has crammed the EAS 100 with a wide range of security features, and then automated them or reduced them to a set of Web configuration screens.

The EAS 100 comes with a built-in RADIUS server and certificate authority to handle security and authentication locally.

The access server also supports 802.1X authentication via Extensible Authentication Protocol-Transport Layer Security.

Other security options include media access control address lists, Wired Equivalent Privacy, a built-in firewall to control specific IP ports and VPN support.

Rodney Kluever, systems specialist with Washington State Department of Social and Health Services in Olympia, uses a higher-end EAS because the network he oversees has more access points than the smaller 100 can handle. But he has seen a demo of the 100 and says: "It would be perfect for a small to medium-sized business." ■

Middleware is Everywhere. Can you see it?

5

2

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IBM

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Interop

continued from page 1

products that are co-developed and tied together, are preferable, he said.

"Very few customers buy technology anymore based on feeds and speeds and price," Chambers said. When it comes to deploying infrastructure that's secure and can handle voice, video and data, "your support cost for all those different pieces are going to be huge if they all come from different vendors." Any savings will be lost on time and money spent trying to get products to work together, he added.

Kriens' keynote took the opposite view. Juniper's technology focus is solely on secure and fast network transaction processing, with multi-vendor partnerships for other areas of expertise, the CEO said.

"One of the claims I would not make is that we have all the answers," Kriens said. "We don't claim to do all things, but we claim to do some things that are really important, really well."

However, Kriens did say industry conditions make it hard for smaller vendors to survive, citing his company's own acquisition of two smaller players — Peribit Networks and RedLine Networks — last week. Kriens also emphasized Juniper's Infranet and Enterprise Infranet initiatives, which look to build multi-vendor standards for securing the public and private business networks. To this end, he cited the partnership announcement last week with Avaya, where Juniper and Avaya will co-market and resell security and VoIP gear.

"People want open standards and to make choices," he said. An example: "IP PBX decisions should not dictate your routing, switching and security decisions."

Many users milling about on the Interop show floor said they were taking this multi-vendor approach to solve problems in some of the hottest technology areas: wireless, security, and convergence.

"I take a portfolio approach to choosing vendors," said Irving Tyler, vice president and CIO of Quaker Chemical in Conshohocken, Pa. With a mix of gear from Avaya, Cisco and Perabit, he built a secure wide-area VoIP network that lets remote offices access centralized data centers and IP PBXs for voice.

"I look for vendors that have a robust technology and look for companies that are looking to grow with us and are in it for the long run," he said. "We're looking for companies that are hungry enough that they're willing to help us with more than just closing a sale."

The days of making different vendors' switches or routers or other basic infrastructure gear work together are mostly done, as many companies standardize on one vendor for routing and switching infrastructure. But particularly in the area of locking down wireless LANs (WLAN), users at Interop were more open to shopping around for ways to make the airwaves safe for network traffic inside and outside of corporate and governmental office buildings.

For Mike Mataraza, expanding his wireless network at Parkview Health in Fort Wayne, Ind., depends on the availability of better bandwidth management capabilities, but security features are his main concern. A Nortel customer, Mataraza came to Interop to check out competing products from Cisco, Extreme Networks and Foundry Networks.

"We have a few wireless hot spots, but we are looking to expand our wireless throughout the hospital, and I have to be sure I can secure the internal network," he says.

Others have been holding off on wireless rollouts because of a lack of appropriate security tools.

"We are waiting to find technology that can scan hardware and make sure it complies with our parameters before it is let onto our network," says Kevin Lemaster, technology coordinator at Lemoore Union High School in California. "Being a school, we need to be sure we can keep the wrong people out before we get into wireless."

Some attendees shopping for WLAN gear say they aren't even going to dabble in the technology until a vendor proves it can be secured.

"We have no wireless because I am looking for security products that can address multiple areas like prevention, detection, rogue access points, firewalls and basically anything that can protect the enterprise network from wireless security risks," said Roberto Suarez, an engineer for the U.S. Army at Fort Huachuca in Arizona.

For users ready to pull the trigger on network buying decisions, the show floor had plenty of new gear from which to choose — from high-performance switching, network management integrated security and wireless gear, to applications and services.

Foundry kicked off the week of product announcements with updates to its 10G Ethernet switch portfolio — the BigIron RX switch family. The product family includes three chassis with four redundant switch fabrics, which can scale to a total of 1.5T bit/sec, with support for up to 192 10G Ethernet ports, 768 Gigabit ports or a mix of speeds.

"We're pleased with the uptake in 10 Gig," said Foundry CEO Bobby Johnson. "It's not Mr. Small Businessman [looking at 10G], but it's clustered computing applications, Internet exchanges as well as big corporate, university and government backbones. And already, I'm being asked what's beyond 10G. And that's no joke."

Even Foundry, long focused more on pure speed and performance, outlined an entrée into the security realm. Johnson also hinted at Foundry's upcoming security strategy, which will involve new products based on the company's deep-packet-inspection technology, such as Layer 4-7 switching.

"We're not announcing any security products here, but stay tuned over the next 30 days," Johnson said. "There will be some specific, homegrown security products coming from us that add value to [customer's] existing security infrastructure, doing things it doesn't do well. And over time, migrating customers off of an existing security infrastructure to Foundry."

Cisco's security addition

Also on the security front, Cisco introduced its Adaptive Security Appliance (ASA) 5500, which consolidated PIX firewalls, Cisco VPN 3000 concentrators and IDS 4200 appliances into one device.

"You don't have to log in and out of firewalls and IDS devices [and VPN gear]. You're dealing with just one device," says Jayshree Ullal, senior vice president of Cisco's Security and Technology Group.

Cisco said the ASA 5500 can integrate into a current PIX, VPN Concentrator or IDS appliance, because each service is built on chunks of code taken from the respective point product. Eventually, Cisco customers could migrate away from multiple boxes and deploy only ASAs at the network edge and in data centers.

The ASA 5500 series ranges from $3,500 to $17,000, and can operate at speeds from 300M to 650M bit/sec. Cisco also launched a new appliance that lets users track the location of WLAN clients and devices, with its Wireless Location Appliance 2700, based on technology from Airespace.

Also at the show, Expand Networks announced a new version of its ExpandView management software, which lets network managers administer, configure and collect data from distributed acceleration appliances. Version 3 includes a mapping feature that provides a topology of all the Expand Accelerator appliances at remote and branch offices. ExpandView is installed on dedicated Windows servers and the appliances send application traffic statistics to the software, which now can provide trend reports on historical data. ExpandView 3 costs between $5,000 and $45,000.

Extreme rolled out the next wave of its XOS, modular-operating system switches at the show with the Summit X450, a fixed-configured box with 24 10/100/1000M bit/sec ports, which can communicate with an XOS-based BlackDiamond switch. With switches on this common operating system in the core and edge, Extreme said the devices can self-configure, provision and react to threats by adjusting QoS, access control lists and other settings on the fly. A language using XML-based messages is the medium that two XOS switches talk to each other, Extreme said. Pricing was not released. ■

INTEROP2005

PHOTO: JASON REISMAN

Winners of the Network World Renovator Award, sponsored by Juniper Networks, were celebrated at an event during Interop. Taking home the top honors was David Stever (right) of energy company PPL, for a network overhaul involving metropolitan-area optical Ethernet services and VoIP. The two other finalists were: Erik Durand (left) of PSOMAS, a civil engineering firm, which migrated from frame relay to MPLS to support 12 branch offices, and implemented a wide area file service to support real time distribution of huge CAD files; and James Klein (center) from the Saugus Union School District. The California school district upgraded its 16 site network to support VoIP and video distribution, while also moving from Novell Netware to open source solutions. All three organizations will be profiled in next week's issue.

PHOTO: THE PHOTO GROUP

***Network World* editors and Lab Alliance members debated at Interop on what companies and technologies should survive Listen to their discussion at www.networkworld.com, DocFinder: 7052. Pictured are (from left) John Gallant, Johna Till Johnson, Paul McNamara, Mark Gibbs and Joel Snyder.**

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Report: VC telecom funding on the rise

■ BY CARA GARRETSON

It's not exactly 1999 all over again, but venture capitalists are starting to show renewed interest in certain network and telecom niches, and investment revival that could spawn more innovative products and services.

According to the latest Quarterly Venture Capital Report released by VentureOne and Ernst & Young, there were 68 investments in communications companies during the first quarter. That level hasn't been reached in more than two years, although it is still far from the 226 investments made during the third quarter of 2000. The report defines these companies as communications device makers and service providers.

The communications sector fared better during the first quarter than overall investments in IT companies, which at 290 deals represented the lowest level since the third quarter of 2003.

"We're seeing a spike in the communications sector ... enterprises are spending, carriers are spending and that's driving more interest into the start-up marketplace," says Robb Browne, an Ernst & Young partner who oversees the firm's venture capital advisory group for Silicon Valley.

Investors, many of whom got burned at the beginning of the decade pouring cash into communications companies that didn't make it, now are tentatively testing the waters in certain sectors. Many name wireless and VoIP products and services as hot areas, evidenced by the top three investment deals of the first quarter, as well as certain segments of the optical component arena.

Yet perhaps it was the roller coaster ride investors took with communications start-ups just a few years ago that has made many of them sensitive to so-called hot markets.

"This is a great time to be investing in communications, but also a very selective time," says David Britts, a partner with ComVentures. "We are looking for more off-the-beaten-path [opportunities] and are trying to avoid the overfunded. Clearly Wi-Fi is an area where certainly some will make a lot of money, but there's also going to be a lot of roadkill." ComVentures currently prefers to invest in technology related to wireless networks such as billing systems for wireless carriers, security products for small and mid-size businesses, and video.

Over the past year Britts has seen the quality of deals with communications companies improve in large part because management teams today have been around longer and therefore companies are better run.

William Quigley, managing director with Clearstone Venture Partners, calls investing in communications a mixed bag.

One area that interests Quigley is VoIP mobility, the concept of linking Wi-Fi and cellular networks so that cell phones can roam on these wireless networks. There are technical hurdles to clear in making this technology work, he says, and adds that there are at least a dozen products coming out soon that attempt to do so. "It never will be a $100-billion market like Ethernet switches, but I suspect it will be several billion dollars, and for the communications industry that's very good, given what's been going on in the last few years," he says.

Another area of interest to Quigley is micro multiservice-provisioning platforms that sit close to customer sites to route multiprotocol traffic. "This has been an area where, in spite of other cuts in spending, service providers realize they need to continue to invest," he says. His firm is looking at start-ups that build chips to power such boxes or software to manage them.

Investor focus on new communications technologies means businesses can expect to see more products and services covering an array of areas, instead of multiple me-too offerings.

"In the enterprise, things that are exciting to people are not just the next generation of high-bandwidth switches," says Peter Wagner, general partner with Accel Partners. "It's more likely to be companies that are defining some new category of enterprise infrastructure having to do with virtualization or application delivery or wireless LANs."

Yet not everyone agrees that communications is making a comeback. According to the MoneyTree Report, a quarterly survey of venture capital investments performed by PricewaterhouseCoopers (PwC), Thomson Venture Economics and the National Venture Capital Association, deals in the telecom and network industries added up to 58 and 47, respectively.

These figures can't accurately be compared to those from the VentureOne report because each survey defines the communications category differently. Nonetheless, the MoneyTree Report found telecom and networking are continuing on their downward trend.

"MoneyTree shows that interest in the telecommunications and networking industries continues at low levels," says Kirk Walden, national director of venture capital research at PwC. "There is no sign yet of a resurgence in these industries, regardless of stage of company development."■

In the money

Wireless and VoIP companies were among the biggest money winners in the first quarter.

Company	Focus	Amount invested
[illegible]	[illegible]	[illegible]
Trapeze Networks	Wireless LANs	$17.5 million
[illegible]	[illegible]	[illegible]
Picolight	Optoelectronic components for network equipment	$13 million
[illegible]	[illegible]	[illegible]

SOURCE: QUARTERLY VENTURE CAPITAL REPORT BY VENTUREONE AND ERNST & YOUNG

Compliance, automation fueling interest

■ BY JOHN FONTANA

Corporate requirements to adhere to compliance regulations and a need to automate and secure electronic interaction among partners are the major issues driving interest in identity management, according to users and analysts.

Those issues, along with others focused on privacy, trust, federation and rights management, are the highlights of this week's Digital ID World conference in San Francisco.

While identity management has focused mostly on IT tools such as directories, single sign-on and password management, observers say businesses are starting to realize how important identity is becoming in risk management plans. Experts say awareness will accelerate adoption of identity management.

"There is an awareness occurring among business folks that security is not baked into infrastructure and applications, and that identity and access management play a key role and serve as a cornerstone for applying controls to address information security and [compliance] auditing issues," says Earl Perkins, an analyst with Gartner, who will lead a panel on compliance auditing at the conference. "They finally understand this is all part of risk management, and I view that as a sign that identity management is taking a more rightful place in the minds of business folks."

By the end of 2007, Gartner predicts that nearly

of companies will have deployed or be piloting projects that will include federated identity services.

However, Perkins and others realize that the technology issues are not yet solved. In March, Oracle's acquisition of Oblix was widely seen as the end of vendor consolidation and the start of a new task for vendors developing identity platforms, including BMC Software, Computer Associates, HP, IBM, Microsoft, Novell, Sun and RSA.

"All the platform players have the pieces that they think they need or wanted to buy," says Jamie Lewis, president of Burton Group, who will deliver a keynote speech at the conference. "But these suites are suites in brand name only. The vendors have a lot of work to do creating products that don't overlap, that are tightly integrated on features and functionality, that have a consistent management platform and are all tied together in a package that can be exposed through development tools."

Lewis says another major step is getting those disparate suites to interoperate using standard protocols.

A panel discussion at the conference on convergence of federated identity protocols, one of the most contentious areas of debate around identity standards, will feature the Liberty Alliance, IBM, Microsoft, RSA and Sun.

"Standard-based identity, policy and security interoperability is critical to all our members operating in complex multi-vendor, multinational environments," says Fred Wettling, chairman of the Network Applications Consortium, an end-user group. "One of the IT challenges is how do I reduce the labor burden that has been foisted on people by mandates such as Sarbanes-Oxley in order to become compliant? We need to figure out how we can automate and this is an area where standards-based interoperability is key."

In addition to those issues, a handful of vendors are expected to announce products. RSA plans to introduce Reporting and Compliance Manager, which provides analysis on the logs generated by RSA's access management platform ClearTrust. The reports focus on adherence to policy, policy changes, user activity and intrusion attempts. Epok plans to unveil the next version of its Trusted Data Exchange Server, which will include features for integrating identity management systems.■

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Animals

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customers' phones to go quiet as, well, the mice. The company squarely laid the blame at the tiny paws of rodents that the Swedes call sorks.

The outages were maddening in that they were caused by the animals gnawing through fiber-optic cables after shimmying through 2-centimeter-wide gaps between cement valves and locks designed to protect the phone lines from animals and forces of nature, says Arne Duvberg, chief technician at Flextronics Network Services, a company that maintains TeliaSonera's networks in the region.

And don't even get him started on birds.

"We have to send out service men on a daily basis to take care of the damage being made by the woodpeckers," he says.

TeliaSonera by far wasn't the first network operator to get caught in a mousetrap and won't be the last. Just how common animal attacks on networks are, though, is hard to pinpoint. One estimate, cited by author Robert Sullivan in his 2004 book "Rats" (in which he monitors a New York City alley for a year), is that 18% of all phone-cable disruptions are caused by rats. But others say the frequency of animal-related damage is much lower. AT&T, for example, figures less than 1% of all its outages are caused by rodents.

Despite the shortage of statistics, anecdotal evidence of nature vs. network run-ins abounds:

- In the past few years, rats have been blamed for chewing through fiber-optic cables in locations as varied as Ontario and India, leaving hundreds of thousands of customers without Internet or phone service.
- A data center at Stanford University in the mid-1990s switched to back-up generators after a squirrel blew out the main transformer. The rodent's charred remains were found hours later, exposed by its pungent odor.
- Texas Tech University researchers have cited red, imported fire ants as being network troublemakers as far back as 1939, when Southwestern Bell Telephone reported problems in Galveston, Texas.
- AT&T and other telecom companies and equipment makers seeking ways to protect their networks and products from pocket gophers' choppers drew fire from animal rights activists in the mid-1990s for paying U.S. government researchers over two-plus decades to trap the animals, cage them and watch them gnaw on cables strung within the cages. Such cable-durability tests have since been halted.
- Owners of underwater cables have had to make their links shark resistant after suffering outages caused by fish bites.

Rodents are considered especially threatening to network cabling.

"Rodents and wire damage go hand in hand," says Bobby Corrigan, a pest control expert in Indiana who calls himself an urban rodentologist.

And it's not that the animals are bent on having a high fiber-optic diet, either. Eric Spinner, pest control operator for Maven Pest Management in New Hyde Park, N.Y., explains that rodents gnaw on wires and other chewable objects to grind down their incisors.

"Failure to do so will allow them to grow long and actually occlude their lower jaws to the point where they can't open their mouths to eat," he says.

Telcordia, which crafts specifications used by carriers and equipment makers, tests for the hardness of cables and equipment enclosures, and recommends cabling be protected in covering with at least a 1- or 2-inch radius to prevent certain animals from wrapping their jaws around it.

Ernie Gallo, director of telecom services at Telcordia, says the increased use of fiber-optic cabling has forced carriers to pay more attention to network protection, given that the outage of a single fiber connection can mean many more businesses and individuals will be affected than they will when they are old copper links go down.

Protecting networks from animals isn't only about keeping up communications links. It's also about safeguarding field technicians who work on the lines. Requirements are followed in designing equipment enclosures that are meant to keep insects such as wasps from building nests within them, Gallo says.

Efforts such as covering cables with pepper spray have been made over the years to discourage cable-chewing, Gallo says. Although he emphasizes that sticking to the basic Telcordia specifications can greatly reduce, if not eliminate, animal interference.

Jay Adelson, CTO and co-founder of Equinix, a provider of data centers and Internet exchange services, says a massive rodent-eradication program is one of the first things his company does when building a data center.

"We make sure we quarantine off the building with steel walls and find any point of entry and seal it up," he says.

While outside cabling is commonly sheathed in metal to avoid animal or other damage, armoring cable within a data center can greatly limit the flexibility of cable that might need to be moved often, he cautions. Cabling company experts also say that armoring wires can as much as double the cost, so careful risk vs. cost assessments must be done.

Stuart Aust, for 15 years the owner of Bug Doctor in Paramus, N.J., says his company has helped to protect enterprise networks by putting bait stations outfitted with "rodentcide" under raised floors in computer rooms. "We provide a deodorizer as well," he says, for those cases where rodents die and aren't discovered right away.

Of course, even the best efforts to animal-proof networks aren't always successful.

"Data centers might seem secure, but if there is any hole — if you can put a pencil through it — then a mouse can get through it," says Greg Baumann, technical director for the National Pest Management Association.

Data centers generally provide three things rodents need: food, water and safe harbor. "While companies might not encourage bringing food into these climate-controlled spaces, there is always the leftover birthday cake or emergency granola bars," he says.

And once critters get into a data center, even armoring cable will not necessarily stop them from damaging wires or getting into electrical systems that power networks, says Steven Elmore, an applications engineer with cable maker CommScope.

"It will just slow them down," he says. "I've actually seen armored cable chewed through."

New animal control methods are always in the works, says Michael Conover, director of the Berryman Institute, a national organization focused on resolving human-wildlife conflicts.

"We have been doing research on impregnating a rodent repellent into the plastic covering of cables," he says. "While this approach works in the short-term, it is too early to tell if it is a long-term solution."

You might think the shift from wire-based to wireless networks might give animals less to chew on going forward, but that's not necessarily the case. "There are still a lot of wires in wireless networks," CommScope's Elmore says.

Meanwhile, network professionals say it actually isn't the rats, ants and gophers that have them most concerned. When Flextronics' Duvberg was asked to point out the most harmful animal he answers quickly: "Homo sapiens. When an excavator causes problems, one thing is for sure: The problems are big."

Bostrom is a reporter with IDG News Service in Sweden.

Keeping critters at bay

Methods for animal-proofing your network, according to pest control experts:

- Protect cabling in metal sheating or PVC ducts.
- Minimize food in data centers. Even though many data centers are physically secured, some rodents only need a pencil-size hole to sneak in.
- Keep outside cabling away from spots where animals can climb or jump.
- Avoid gizmos, such as ultrasonic machines.
- Enlist exterminators to do proactive building inspections.

Got great ideas

Got a suggestion for a Wider Net story? An offbeat network industry-related topic? A fascinating personality we should profile? Contact Bob Brown with your ideas at bbrown@nww.com.

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Sun stumbles with grid rollout

■ BY ROBERT MCMILLAN

SAN FRANCISCO — Sun has delayed the rollout of its Sun Grid, an Internet-based utility service that has been under development since late last year.

A lack of computing resources has pushed back the public launch of Sun Grid, originally slated to go live in the first few months of 2005, to as late as July, Sun executives say.

An early access version of Sun Grid is available to certain Sun customers, but a number of recent large-scale grid deployments have forced Sun to divert systems that were to be used for the public site, says Aisling MacRunnels, senior director of utility computing with Sun.

"We can't open that up until we have a substantial number of CPUs behind it," she says of the Sun Grid Web site. "All of those CPUs that we thought were going to be [used] are being reallocated to a very large number of banks."

MacRunnels declined to provide the names of any Sun Grid customers, but says that the first such announcements would be made within 30 days.

Just like power and water

When it becomes publicly available, Sun Grid is expected to operate like a power or water utility. It will deliver raw computing and storage capacity at the flat rate of $1 per CPU, per hour, and $1 per gigabyte, per month. Sun Grid resources are even expected to be traded as a commodity on the Archipelago Holdings electronic exchange, the company has said.

Three regional centers, based in Virginia, New Jersey and London, have been set up to power the Grid, and the company is working on more than 30 proof-of-concept projects with companies in the financial services, petroleum and entertainment industries.

Sun had hoped to operate six regional centers at this point, but technical and logistical issues have prevented this from happening, MacRunnels says.

According to analysts, the Santa Clara computer maker has lagged behind rivals HP and IBM in delivering utility-type services such as Sun Grid, which lets customers connect to remotely managed servers and pay only for the resources that they use. But the publicly available Sun Grid has been promoted as something quite different from HP or IBM's utility products, which are normally customized offerings built for large companies.

Legal issues

Sun also still is hammering out a number of legal and business-related issues as it tries to make Sun Grid available to all, says Dan Hushon, chief technologist of strategic development. "This really comes down to what is the market willing to buy," he says. "The last thing we want to do is put something out there that nobody wanted to buy."

To add to Sun Grid's woes, the executive overseeing the project resigned two weeks ago. Robert Youngjohns, who was executive vice president of Sun's strategic development financing group, left to take a job as president and CEO of San Jose company Callidus Software. Sun's former vice president of Wall Street Technologies, Stuart Wells, replaced Youngjohns.

McMillan is a correspondent with the IDG News Service.

Net Infrastructure

■ SECURITY ■ SWITCHING ■ ROUTING
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Short Takes

■ **Dell** is offering a line of LAN switches that gives users management capabilities at a price that the company says is lower than the cost of its unmanaged switches. The **PowerConnect 2700 Series** switches cost as little as $16 per managed Gigabit Ethernet port. The Layer 2 switches can be deployed as unmanaged switches out of the box. The series includes the eight-port PowerConnect 2708, the 16-port PowerConnect 2716 and the 24-port 2724 starting at $139, $269 and $369, respectively.

■ **Enterasys Networks** last week said it would trim 300 people, or 30% of its workforce, in an attempt to reduce quarterly expenses by between $10 million and $13 million. The company attributed the layoffs to lower-than-expected sales in North America and Europe. The router vendor recently reported that its net revenue for the first quarter of 2005 was $80.6 million, compared with net revenue of $90.5 million in the fourth quarter of fiscal 2004.

■ **AirTight** last week unveiled **SpectraGuard Enterprise 3.0** a wireless intrusion-prevention system that runs server software on an AirTight Linux-based appliance, collecting radio frequency data from sensors scattered over an office or campus to listen for radio transmissions. The sensors are 802.11b/g with radios configured to only receive signals, and usually are tweaked to cover a wider area than a standard wireless LAN access point. Version 3 software now can detect more than one threat mounted against a specific sensor. In the past, when a sensor detected a rogue transmission, it would zero-in on that threat. While the sensor was occupied, that part of the network was vulnerable to a second attack. SpectraGuard now can detect and take actions against eight different types of RF threats. A SpectraGuard Enterprise 3.0 starter kit with the server appliance and four sensors to cover about 100,000 square feet costs about $10,000. Additional sensors are $795.

Juniper revamps security gear

Intrusion-detection added to current family of firewall/VPN devices.

■ BY TIM GREENE

Juniper is adding intrusion detection to one of its firewall/VPN devices and revamping its line of stand-alone intrusion-detection gear, making it possible for businesses to streamline network administration by deploying fewer boxes.

The company last week announced hardware blades for its ISG 2000 firewall/VPN appliance that supports its intrusion-detection and –prevention (IDP) software. The box has three slots for the blades, which do all the processing for the IDP software so it doesn't sap the main CPU that handles the firewall and VPN processing.

Adding IDP puts the ISG 2000 in the same category as Crossbeam, Fortinet and 3Com's TippingPoint Technologies gear, says Jim Slaby, an analyst with The Yankee Group. And the company says it likely will come out with software to support other security functions such as anti-virus.

Fully loaded, the box is suitable for protecting a data center, with 2G bit/sec firewall protection, 1G bit/sec VPN encryption and up to 2G bit/sec of IDP throughput.

The IDP blades process only those packets for which customers have set IDP policies. For example, the main processor might identify signaling packets for a VoIP phone call and have it run through an IDP check looking for an attack. But when it identifies a VoIP payload packet that contains only voice content, it could pass it through without IDP inspection because there are no known voice payload attacks.

Juniper is announcing a second multi-slot firewall/VPN/IDP device called ISG 1000. It has only two slots for IDP cards, and its top firewall speed is 1G bit/sec. The IDP cards are not available yet.

Juniper also is announcing six new appliances that only perform IDP. The boxes will replace older Juniper IDP devices that will be phased out over the next two quarters. The devices are the IDP 50, IDP 200, IDP 600 C (with copper Gigabit Ethernet interfaces), IDP 600 F (with fiber Gigabit Ethernet interfaces), IDP 1100 C and IDP 1100 F. They range in through put from 50M to 1G bit/sec.

Along with the IDP hardware, Juniper is releasing a new version of its IDP software that adds the capability to screen for attacks that violate Session Initiation Protocol, making the software suitable to guard against attacks on VoIP and video.

Juniper's ISG 1000 device, left, supports two slots for IDP cards and firewall speeds up to 1G bit/sec. The ISG 2000 supports 2G bit/sec firewall speeds and three IDP slots.

The IDP software checks with Juniper's network daily to download newly found attack signatures, including spyware.

The software also lets users run suspected attacks in a protected environment to determine whether they are actual attacks. This helps reduce the number of false positives, the company says.

The stand-alone IDP devices cost from $9,000 for the IDP 50 to $65,000 for the IDP 1100 F. The price range for the ISG 2000 is $40,000 to $55,000 for firewall/VPN capabilities. An IDP license costs $6,000 and the IDP cards cost $12,000 each. ■

Juniper, Avaya agree to expand joint development partnership

Juniper and Avaya said last week they intend to tighten their partnership to include joint product development as well as resale and support of each other's products.

Under their current relationship, the companies have integrated some of their products into systems for channel partners to sell and have worked together on some major deployments. Under the new relationship, outlined in a memorandum of understanding (MOU), Juniper and Avaya would develop new products that might carry either company's brand. Each company's sales team also would be able to sell and support the other partner's products worldwide, says Tony Scarfo, vice president of business development at Juniper.

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Details of the MOU, including what types of products the companies will jointly develop, still are being worked out, Scarfo says. The partnership is subject to the parties signing definitive agreements. The partnership is not exclusive, according to Scarfo and Avaya spokesman Jonathan Varman.

Avaya, which was spun off from Lucent in 2000, has similar partnerships with other network vendors such as Extreme Networks. The agreement with Juniper was announced as Avaya introduced updates to its IP PBX family at the Interop trade show in Las Vegas.

The planned partnership would be the first of its kind for Juniper in the enterprise market. The router company, the primary rival to Cisco for carrier core routers, has strategic partnerships with Lucent, Siemens and Ericsson for carrier products, says Juniper spokeswoman Susan Ursch. Lucent last week announced it will resell Juniper routers to BT Group for its so-called 21st Century Network.

Juniper in recent years has expanded its scope to enterprise routing and last year expanded into firewall and VPN technology by buying NetScreen Technologies. Both partners face Cisco as a competitor in their respective enterprise product categories, extending from routers to IP phones.

The deal probably will be final by the end of the quarter, Ursch says.

— Stephen Lawson, IDG News Service

TOLLY ON TECHNOLOGY

Kevin Tolly

Pillars of VoIP service — bandwidth, architecture

For all of the high-profile "Broadband VoIP" advertising we're being inundated with of late, you'd think that the major differentiators between leading contenders fall into just two categories: bells & whistles, and price. But what about voice quality? Does it matter anymore?

A quick review of the home pages of high-profile VoIP services Lingo (Primus), VoiceWing (Verizon) and Vonage (at this writing) throw more features and pricing information than you can possibly absorb but not one of the three ever makes reference to voice quality.

Why might that be? Can they consider the concept so esoteric that it is above the average consumer at whom their sites are targeted? Hardly. Then perhaps they don't mention it because they've determined that it is not a factor in service selection — that it simply is not a differentiator.

While some would say that cell phones have lowered our expectations when it comes to voice quality (and I wouldn't disagree), I don't think anyone would say it doesn't matter. In the case of cell phones — and despite claims of great coverage implied by the "can you hear me now?" ads — it's virtually axiomatic that every user will experience some poor-quality voice on some occasions. And, with so many cell-phone-user-to-cell-phone-user conversations, who can say which service is really to blame?

So true or false?: The reason broadband VoIP services providers spend so little effort on marketing voice quality is because they are all the same.

False. Here at The Tolly Group, we've spent some months setting up and benchmarking the voice quality of a dozen or so such VoIP services — the services mentioned above plus others such as 8x8, AOL, Broadvoice, CallEverywhere (Belkin), Net2Phone, SIPphone, Skype and Yahoo (see www.networkworld.com, DocFinder: 7033).

So true or false?: The reason broadband VoIP services providers spend so little on marketing voice quality is because they are all the same.

If there's one thing that we've determined, it's that voice quality matters. In our research, we used the sophisticated Voice Quality Tester (VQT) from Agilent to measure voice quality using the PESQ scale. Within each service — tested using various samples multiple times at various times of the day — the results were consistent.

But the results varied dramatically across the services tested.

Fortunately, most of the services tested delivered voice quality that rated a "good" or better using PESQ. A few achieved "excellent" ratings — but a few had top scores that were in the "poor" range.

Along with our voice-quality tests, we captured the packets constituting the VoIP conversation and analyzed both the bandwidth consumption and the conversation architecture. As much as anything else, these appear to be the keys to quality.

Voice quality was directly correlated with bandwidth consumption. Translation: If you are willing to devote more bandwidth to your conversation, you'll get better quality. Vonage is one of the few companies we saw that explicitly acknowledges this trade-off and lets its users decide (although not on a call-by-call basis). Users can log on to their account and ratchet the quality/bandwidth up or down as they please. Sure enough, our tests show that when you squeeze the conversation over a narrower pipe, you pay the price in quality.

Equally important was the conversation path between stations. When we set up conversations between two stations on the same LAN, most services let the two communicate directly after the call was set up — resulting in virtually non-existent end-to-end delay (latency). Others required all packets to leave our lab and get relayed through some central site — causing delay to be significant and degrading voice quality.

Most, if not all, of these broadband VoIP providers have their eyes set on expanding to business customers.

Don't let their silence on issues such as voice quality and architecture silence your concerns.

Tolly is president of The Tolly Group, a strategic consulting and independent testing company in Boca Raton, Fla. He can be reached at ktolly@tolly.com.

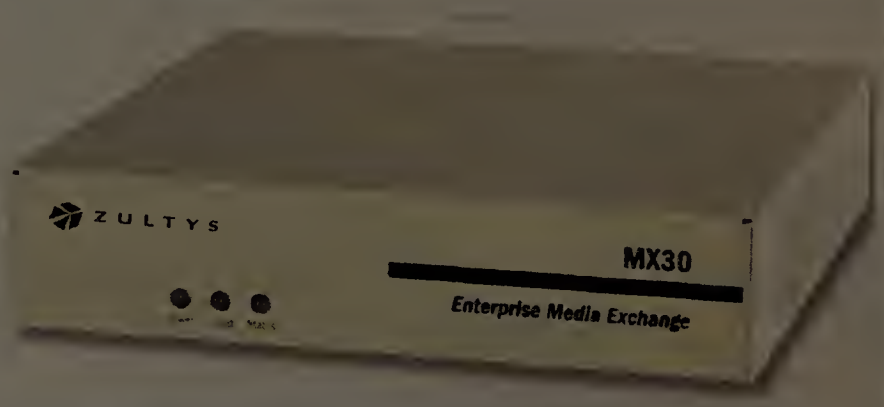
Zultys launches small-office SIP-based IP PBX

■ BY PHIL HOCHMUTH

Zultys Technologies last month released a small-office version of its IP PBX, which targets offices with fewer than 30 users.

The MX30 could be used as a stand-alone IP PBX in offices that need business phone systems with standard PBX features and voice mail with integrated e-mail support. The devices are also ideal for hooking up offices with a pure-VoIP phone service connection, as opposed to connecting a PBX or IP PBX to a traditional public switched telephone network (PSTN) T-1 link for outside calls, the vendor says.

The MX30 joins Zultys' lineup of IP PBXs that are based on Session Initiation Protocol (SIP) and use Linux as an underlying operating system for call applications. (Other models include the 250-user MX250 and the MX1200, which supports more than 1,000 IP phones.) Like its MX cousins, the MX30 supports instant-messaging and presence features through a softphone/unified messaging client that works with the appliance. Thirty voice mail boxes are supported on the device, with a total of 48 hours of message storage. The box includes an integrated firewall and VPN capabilities. The device works with Zulty's line of SIP-based IP phones and also can work with third-party SIP phones from such vendors as Alcatel, Cisco, Pingtel and Siemens.



Zultys' MX30 IP PBX features instant messaging and presence controls for small businesses.

The MX30 competes with small-office IP voice systems such as 3Com's NBX, Altigen's AltiServ, Avaya IP Office and Nortel's BCM 50.

The focus of the MX30 is on deployments at sites that use a business VoIP service provider. The MX30 has been certified to work with IP telephony services from NexVortex, a provider of VoIP service for small businesses. In a Zultys/NexVortex deployment, an MX30 would connect directly to the NexVortex VoIP network, where PSTN calls are terminated. This could allow for low-cost call routing and improved features over competing RBOC small-business phone service rates, the vendors say.

The MX30 is priced starting at $1,200. ■

Anti-virus firm joins spyware battle

■ BY ELLEN MESSMER

Anti-virus firm Eset last week announced it has added anti-spyware filtering to its NOD32 Version 2.5 software for helping users protect Windows desktops and servers, and a range of Lotus, Novell and Linux servers.

Eset won't charge more than its current $39 per seat for adding the anti-spyware and adware-filtering capability, according to product manager Rick Moy. Most other anti-virus firms stepping into the anti-spyware market, including McAfee, Symantec and Computer Associates, bumped up the price when they began offering both anti-virus and anti-spyware capabilities.

Scott Brown, information security analyst at Colby Sawyer College in New London, N.H., said he's been beta-testing NOD32 Version 2.5 on college machines. "This new product has a couple of great features such as automatically sending the infection to Eset to be analyzed," he says.

The college is considering requiring its students to use the anti-virus/anti-spyware software to protect both the students' PCs and the campus network. Virus outbreaks have caused the most problems on the campus network to date, but spyware is viewed as a growing threat because it's jamming up student PCs.

"We've seen student machines that couldn't even turn on or connect to the network because of spyware," Brown says.

While students are responsible for maintaining their own machines, the reality of campus life is that when they have difficulties they can't solve, they turn to the campus IT department for help, says Brown.

Eset's NOD32 Version 2.5 also includes a central management console to distribute, update and publish reports. Pricing is set at $1,500 for the 50-user enterprise edition. ■

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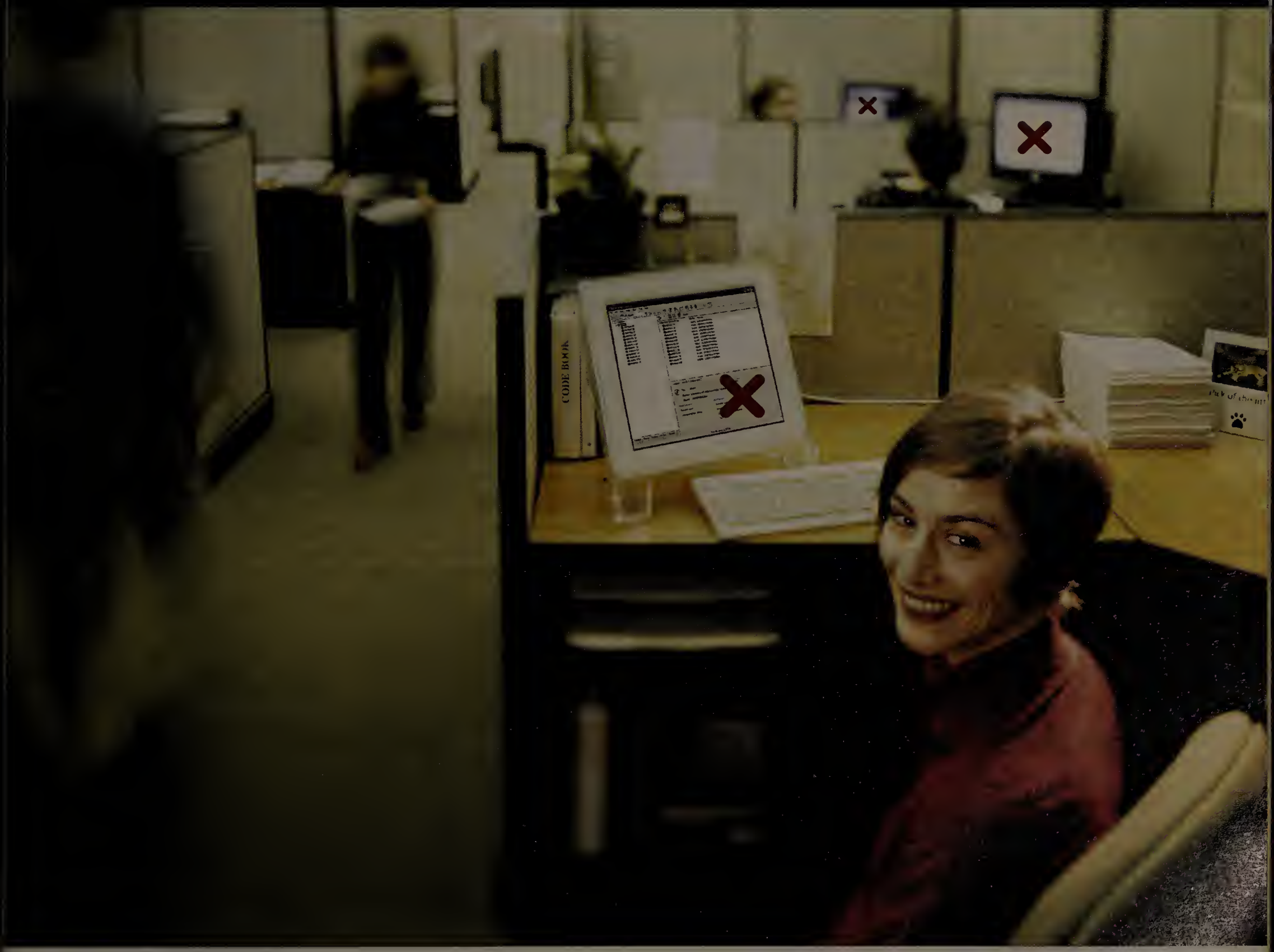

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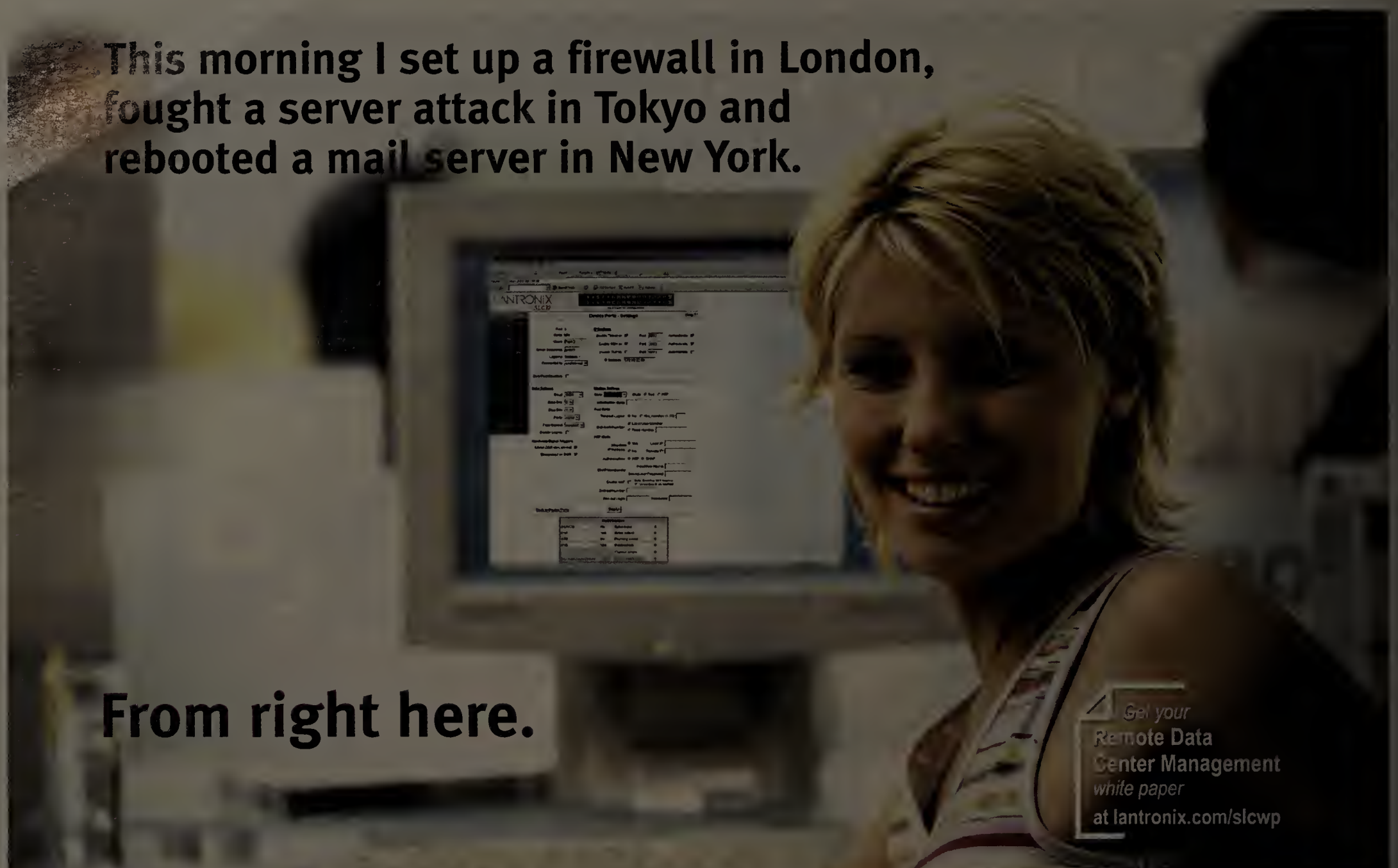

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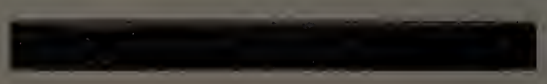

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Intel playing catch-up to AMD efforts

■ BY TOM KRAZIT

SANTA CLARA — Intel's top server executive recently acknowledged the disparity between his company's server processor road maps and Advanced Micro Devices, but said Intel plans to close the gap soon with a revitalized product line.

AMD released its first dual-core server processors two weeks ago, but Intel is not expected to follow suit until the first quarter of 2006 with its Dempsey processor. Intel's single-core Xeon chips will be well behind the performance of AMD's dual-core Opteron processors, but server customers weigh many factors when making a purchase decision, says Pat Gelsinger, senior vice president and general manager of Intel's Digital Enterprise Group.

Users will find dual-core Opteron servers intriguing when compared with single-core Xeon servers, Gelsinger says. "There will clearly be some tire-kickers, and maybe some losses," he says, referring to Intel customers who might switch to servers based on AMD's chips.

However, enterprise customers are generally conservative when it comes to technology changes, Gelsinger says. Users interested in servers with four or more processors currently have the option of Intel's new Truland platform, which will protect any current investments by letting customers plug dual-core Xeon chips into their current Truland servers when these chips become available next year, he says. Things are not so rosy on the two-way server front. Intel currently does not offer a chipset for two-processor servers that will support dual-core chips and prevent customers from having to buy another server in 2006 to take advantage of dual-core performance.

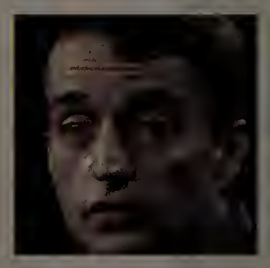
The six months or so between Opteron's dual-core debut and Intel's Dempsey are probably short enough for Intel to dissuade customers from fleeing, says Nathan Brookwood, principal analyst with Insight 64. With the disclosure of several dual-core projects at March's Spring Intel Developer Forum, the company reassured customers wary about its future road map, he says.

But Intel still will have a difficult time competing against Opteron because of the Xeon product's reliance on a front-side bus to coordinate the exchange of information between cores in dual-core processors, Brookwood says.

Intel's chips use a pathway known as a front-side bus to connect the CPU with a system's chipset, where it can access data stored in memory chips, I/O ports or another processor core, whereas Opteron's designers connected the CPU directly to the memory chips, I/O and a second processor core with the Hypertransport interconnect technology. This design improves performance because data can travel directly from the CPU to memory or another CPU without having to pass through the chipset, Brookwood says.

AMD's dual-core Opterons will have a demonstrable performance advantage over single-core Xeons, simply because two processing engines can accomplish more than one. But the dual-core Xeon still will be at a disadvantage to a dual-core Opteron on certain applications because of Intel's bus design, he says. Intel's Truland platform uses an improved bus design, which will help close the gap for servers with four processors or more, but even Truland will fall a little short of the levels achieved by the dual-core Opteron in similar servers, he says.

Once Dempsey is released next year, application benchmarks will deliver the final verdict for customers looking for the highest levels of performance, Brookwood says. But other customers who have been purchasing Intel-based servers for years will probably be hesitant to switch, he says.



"We've gotten far too focused on the OEM relationships. We need to focus more on the ecosystem and the end users themselves."

Pat Gelsinger
Senior vice president and general manager, Intel's Digital Enterprise Group

Last year Intel was plagued with project delays and cancellations, as well as manufacturing problems. Gelsinger, who shares responsibility with Abhi Talwalkar for the Digital Enterprise Group, is making sure those execution problems do not happen again, he says.

Intel also plans to be more involved with end users in upcoming months, Gelsinger says. "We've gotten far too focused on the OEM relationships. We need to focus more on the ecosystem and the end users themselves."

Krazit is a correspondent with the IDG News Service.

Short Take

■ **HP** and **EMC** last week said they have signed a five-year patent cross-licensing deal that will end four years of litigation between them. The settlement agreement calls for HP to pay EMC a $325 million "balancing" payment. HP's payment obligation can be satisfied through purchase of EMC software for internal use or resale, the companies said. The settlement stems from EMC suing storage management company StorageApps in 2000, claiming StorageApps' technology infringed EMC patents on creating mirror copies of system files. HP became involved in the dispute when it acquired StorageApps in 2001.

XOsoft product verifies disaster-recovery tools

■ BY DENI CONNOR

XOsoft last week introduced software based on the premise that data replication and mirroring software isn't any good if it isn't working.

The company, which sells replication and mirroring tools, says Assured Recovery is designed to simplify the process of making sure such tools are in order.

Only 40% of the three dozen IT professionals surveyed recently by TheInfoPro research firm said they are "somewhat" confident that their disaster-recovery systems will work when called upon. The survey also found that testing costs from $30,000 to more than $1 million, perhaps explaining why only half of those asked said they test their disaster-recovery systems yearly.

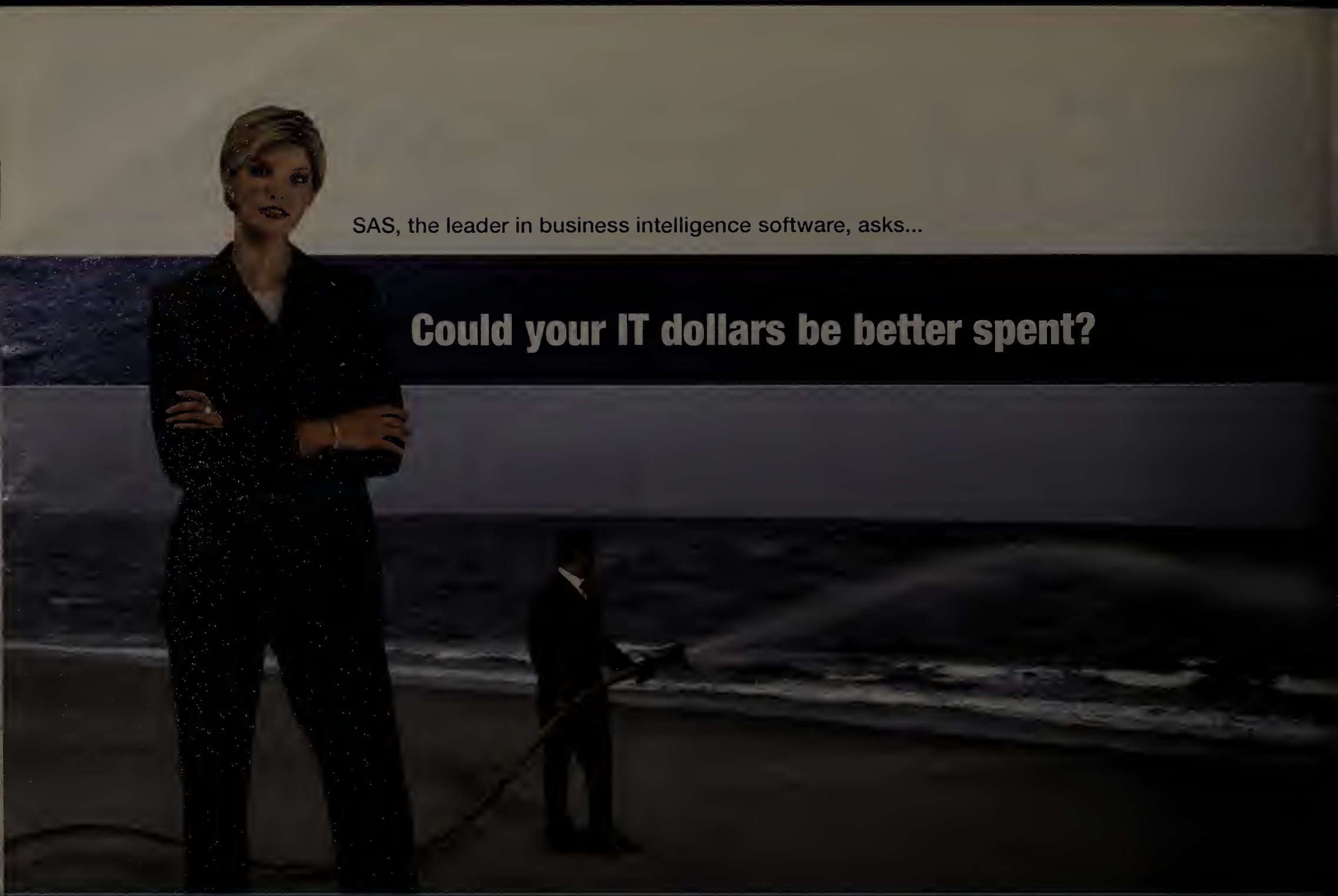
Assured Recovery installs on a host computer (such as one running Microsoft Exchange or an Oracle database), suspends the replication process and spools any data changes to a file. Software installed on a remote server validates its database. The master server is restored to the pre-test state and changes continue to spool. These changes are sent to the remote server and replication resumes.

"An untested solution is no solution," says Gil Rapaport, executive vice president of marketing for XOsoft. "Over time, server migrations, changes to the network configuration or hardware failures may cause replication or mirroring operations to fail. A gap is created between the last time the company tested its disaster-recovery system and its current readiness to do recovery."

Analysts say testing replication processes is typically cumbersome, expensive and causes unnecessary downtime.

"The real difficulty in business-continuity/disaster-recovery testing is that until you mirror or replicate the data, recover it and restart all your applications on the secondary site, you have no idea whether the data you are mirroring or replicating is actually consistent, recoverable and restartable," says Stephanie Balaouras, senior analyst with The Yankee Group.

The initial release of Assured Recovery only supports XOsoft's WANSynch and Enterprise Rewinder products, although extensions are planned. The software costs from $2,400 to $9,600 per server. ■



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Start-up aims for always-on Exchange

■ BY JOHN FONTANA

Back-up and recovery start-up Teneros is developing an appliance designed to help users ensure that their Microsoft Exchange environments are always available.

The Teneros Applications Continuity Appliance (ACA) for Microsoft Exchange provides a real-time backup for the Exchange mail store and the capability to transfer e-mail operations to the appliance if the Exchange server goes down or is in need of service. The appliance is in beta.

Customers can provide end users with uninterrupted access to their mail stores. The appliance works without users having to install any agents on the Exchange server or reconfigure their networks, according to company officials. Teneros remotely monitors and updates the appliance.

It works using technology Teneros developed called Instant-On, which lets ACA instantly take over e-mail duties from an Exchange server when problems are detected or a server fails. While the Exchange server is healthy, ACA continually replicates the contents of its mail store.

"Teneros replicates the Exchange information store. That is the unique factor, and it really works," says Keith Costas, director of engineering at InfoPartners, a systems integrator in San Mateo, Calif. "We have tried for years and years and years all types of solutions for Exchange backup and recovery."

He says products from Legato Systems, Microsoft and NetApps all had major drawbacks. In addition, Costas says Teneros lets him schedule general Exchange maintenance anytime, instead of just off-peak hours when the entire system had to be down. And he says rebuilding a failed server takes about 90 minutes compared with 10 to 12 hours, because Teneros holds a copy of the entire mail store.

In the event of an Exchange failure, the appliance, which sits in front of Exchange on the network, assumes Exchange's IP address to ensure that incoming mail is not dropped and users can get to their inboxes. ACA takes the mail it receives when Exchange is down and replicates it back to the server when it is brought back online.

"ACA sits at the Ethernet layer. We are a pass-through; we don't intercept e-mail," says Manish Kalia, director of product management for Teneros. "When Exchange goes down, within a second we want to flip users over to ACA. What we have is unique technology to do that switch."

Also unique to ACA is Teneros' Transaction Integrity Validation real-time data verification technology, which ensures corrupt data in Exchange is not replicated to ACA.

To harden itself from failure, ACA has multiple independent CPUs, hot-swappable power supplies and hard disks, and hardware RAID with redundant controllers.

ACA also includes built-in Sophos anti-virus and anti-intrusion technology to protect against worms, viruses, network-level attacks, identity spoofing and Trojans.

One ACA, which is priced starting at $10,000, is needed for each Exchange server, which can have up to 100G bytes of mail or 250 users. Teneros also can develop custom models for users with larger Exchange servers.

ACA, which competes with similar products from XOsoft, NSI Software and Neverfail, supports client access from Outlook 2003, 2002, 2000 and XP, and Outlook Web Access, Microsoft's browser-based client. On the server side, the appliance supports Exchange 2003 and Active Directory running on Windows Server 2003. A version is planned that will support Exchange 2000.

ACA is expected to be available in August. ■

Targeting downtime

Start-up Teneros is developing an appliance to help keep Exchange environments up and running. The company will face competition from a number of vendors, although none that offer an appliance.

Vendor	Product	Description
Neverfail	Neverfail for Exchange	Neverfail Heartbeat replicates data between Exchange and, back-up server.
NSI Software	NSI Solutions for Exchange	Company's Double-Take technology replicates changes to Exchange data continuously.
XOsoft	WANSync Exchange, Enterprise Rewinder Exchange	Automatic failover; Rewinder returns data to pre-corrupted state.

Short Takes

■ **Fair Isaac,** the Minneapolis firm that offers the **Falcon** line of high-end analytic software that compiles many credit scores and risk evaluations in the U.S., last week announced Unix- and mainframe-based software that unites the features in all 15 Falcon lines into one enterprise software package. Called Falcon One, the software, which Fair Isaac will also be offer as a hosted service, is intended to make it easier for financial institutions to deploy Fair Isaac products.

■ Security management vendor **eIQnetworks** last week announced an upgraded version of its security management software that includes more tools to help customers deal with regulatory audits. **Network Security Analyzer 4.2** includes log collection mechanisms, monitoring and reporting features, and analysis tools that could help pinpoint the source of a compliance issue. NSA 4.2 also includes pre-formatted reports for regulatory standards such as the Health Insurance Portability and Accountability Act, Sarbanes-Oxley, Gramm-Leach-Bliley Act and Federal Information Security Management Act. The software, which runs on Windows servers, uses syslog collection techniques and APIs to build links into systems and gather data across security and network devices. The product also includes compliance reports custom-designed to meet multiple regulatory auditor requirements. Log data can be stored in any type of storage device, the company says. NSA 4.2 is priced from $900 per device.

Symantec targets client management

Company announces products to manage, secure and restore desktop devices.

■ BY DENISE DUBIE

Symantec last week unveiled a suite of client management applications that the company says will converge management features, security capabilities and storage tools to help customers more easily maintain, secure and restore end-user desktops and other client devices.

The company says it has brought together capabilities from its Norton anti-virus and Ghost back-up and recovery tools with systems management technology acquired in February 2004 from On Technology to deliver its LiveState Client Management Suite. The suite includes seven software applications. Some are stand-alone, others are add-ons that snap into other products. They address desktop management tasks such as asset discovery, software delivery, configuration management, patch management, vulnerability assessment, imaging, migration, remote control, and backup and recovery.

Symantec strings together the tools by incorporating a common database and agent within the applications. The suite uses server and distributed agent software to manage and secure end-user clients. Because different IT administrators would use the products, Symantec says it maintained separate consoles for the applications but incorporated Web-based interfaces "with a similar look and feel." For example, a security staffer in charge of anti-virus scans would access one console and a network administrator responsible for distributing software to desktops would use another.

The company says integrated tools that address the security, storage and manage-

See Symantec, page 26

NET INSIDER

Scott Bradner

Maybe it is mulish stupidity after all

Three weeks ago I wrote about the U.S. government's efforts to keep the pending electronic passport from being too secure. I still don't know for sure why the government tried so hard to do this, but it's beginning to look like we should apply the old adage "Never ascribe to malice what can be adequately explained by stupidity."

Deputy Assistant Secretary of State Frank Moss spoke on a panel about electronic passports at the Conference on Computers, Freedom & Privacy (www.cfp2005.org) in mid-April. Security guru Bruce Schneier and Barry Steinhardt, director of the ACLU's Freedom and Technology Program, joined him on the panel. You have to give Moss credit for being willing to come to what was obviously going to be a den of doubters.

Network World sister publication *PC World* (www.networkworld.com, DocFinder: 7022) covered the event and provided audio recordings of the talks. Schneier spoke first and focused on putting the issues in context (DocFinder: 7023).

Next came Moss, who said the government had received more than 2,400 comments on the electronic passport proposal (DocFinder: 7024). He did not say, but it's my guess that most of the comments did not much like the proposal. He said that the passports, which are scheduled to be given to U.S. diplomats in August, would not be implemented unless the government was sure that they would be safe. (The government is doing a test drive of its own targets.) He said that the government was looking at a number of options, including building a Faraday cage into the passport to block scanning, but then he reiterated that the passports could only be read by a scanner from a distance of 10 cm. He went on to say: "The idea that you can walk down a hallway in a hotel and pick out the Americans, is quite honestly, poppycock. The same thing goes for the bar in Beirut. These things can only be read at very short distances." I expect Moss is right about the hotel hallway, but expect he is incorrect about the Beirut bar — something that he was about to find out.

Third up on the panel was Steinhardt, who proceeded to give a live demonstration of scanning a passport, which was outfitted with an RFID chip of the type specified in the standard, at a distance of three feet. Moss finally seemed to have paid attention when this was demonstrated in front of him because a few days later, he told *Wired News* that the government was suddenly "taking a very serious look" at the scanning issue. He didn't say what the result of the serious look might be, but maybe the government will adopt the Basic Access Control (DocFinder: 7025) standard developed by the same people who developed the rest of the standards for electronic passports. See the paper "Security and Privacy Issues in E-passports" by researchers Ari Juels, David Molnar and David Wagner (DocFinder: 7026) for an analysis of this and other security issues about e-passports.

So maybe Moss and company just needed to be shown they were wrong — in public — to get them to listen. We will know soon if they learned any lasting lessons.

Disclaimer: Lasting lessons are what places like Harvard are all about but we prefer to not use public embarrassment to get a student's attention. Anyway, the above is my hope, unshared (as far as I know) by the university.

Bradner is a consultant with Harvard University's University Information Systems. He can be reached at sob@sobco.com.

Vendors improve remote server management products

■ BY DENISE DUBIE

Server management vendors last week at Interop introduced products designed to give systems administrators direct access to remote machines and ease management tasks.

Avocent and Cyclades separately unveiled products that will let customers take control of multiple remote systems from a centralized location. The products could eliminate the need for administrators to visit each machine for routine maintenance or troubleshooting tasks, and reduce management traffic on networks, industry watchers say.

"In the short term, products like this provide access to infrastructure when there is no connectivity over the network to a failed device, and down the road this type of technology will enable infrastructure managers to more securely access machines without using the production network," says Dennis Drogseth, a vice president with Enterprise Management Associates.

Virtual media

Avocent added support for virtual media to its DSView 3 management software and its DS Series KVM over IP switches. Virtual media is simulated media that performs the same function as a mass storage device, such as a hard drive, CD drive or USB, without physically being connected, the company says. The DS Series virtual media feature will let administrators remotely move local data to and from servers to perform a variety of tasks across heterogeneous platforms.

Working remotely

More than

90%

of about 520 systems administrators surveyed say the most important capability of remote administration technologies is access to the remote operating system as if the operator were physically present.

SOURCE: CYCLADES, NOVEMBER 2004

The software runs on a workstation or laptop and accesses remote servers using protocols such as Intelligent Platform Management Interface (IPMI). IPMI, developed by Dell, HP, Intel and NEC, defines interfaces for use in monitoring the physical health of servers such as temperature, voltage, fans, power supplies and chassis. The goal is to enable easier management of large numbers of servers from multiple vendors.

Avocent says an administrator can use the DSR appliances through a USB 2.0 interface to upload fixes or patches directly to attached servers, or use the DSView 3 software-mapping menu to manage remote target servers.

"Avocent's move to using IPMI is a natural evolution of its KVM background," says Kelly Quinn, an analyst with IDC. "The platform-agnostic capabilities will offer customers more options than what they could get from the server vendors."

Pricing for DSView 3 software ranges from about $2,500 to $4,500.

Separately, Cyclades announced its AlterPath software would be integrated with HP OpenView to help customers access details of their server infrastructures from their OpenView consoles.

The AlterPath Integrate for HP OpenView software modules run on top of OpenView and enable integration between OpenView and AlterPath. The OpenView software module is expected to be available next month.

Pricing starts at about $10,000 for a 1U server installation and about $15,000 for a 2U server installation.

Cyclades also last week introduced a new branch-office appliance, the AlterPath OnSite, which the company says will let network managers configure and manage remote servers and routers from one location.

Cyclades will pre-configure the appliance and customers would install it at a remote location and connect it to serial ports on servers and routers.

AlterPath OnSite is expected to be available next month. Pricing starts at about $3,200. ■

Symantec

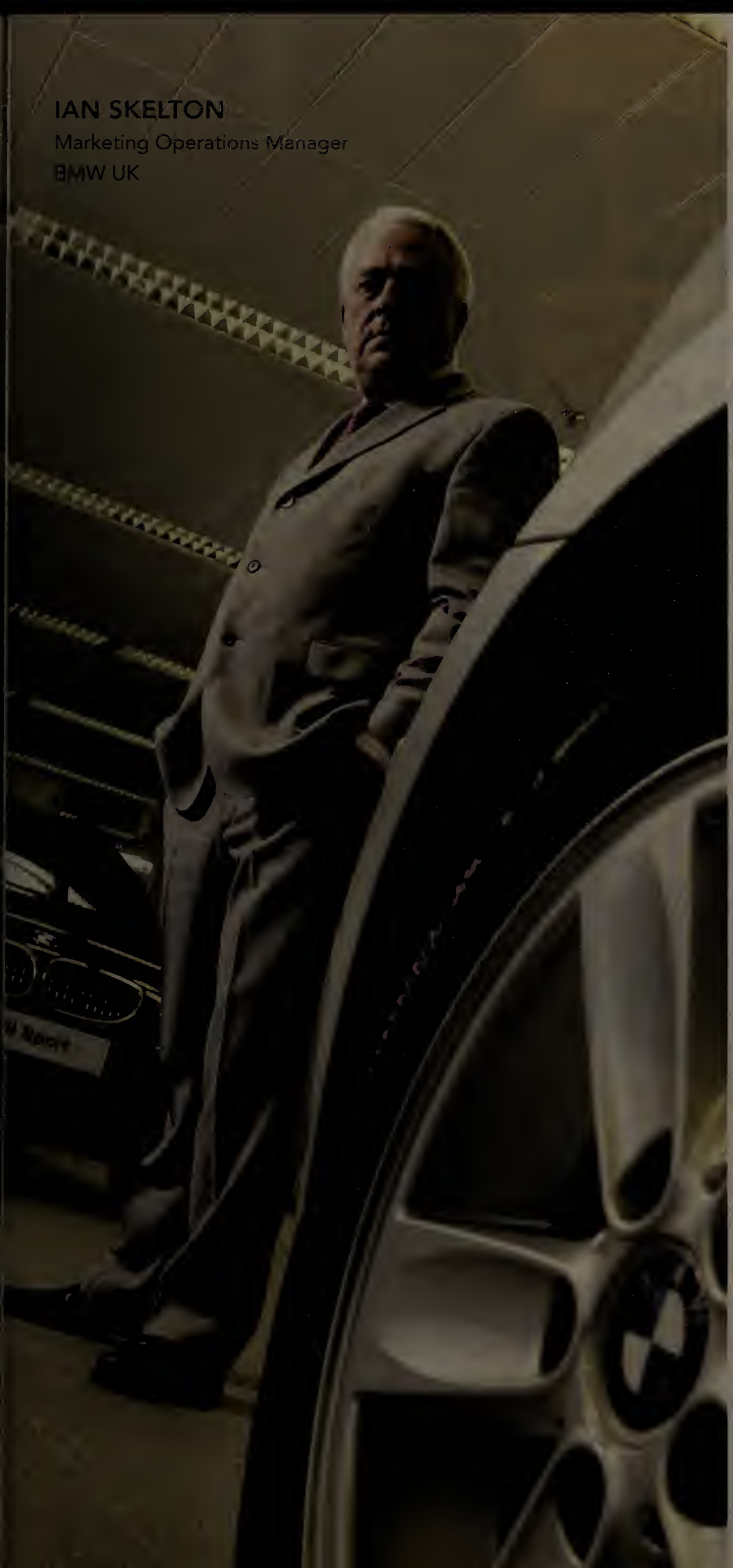
continued from page 25

ment needs of desktop users could help lower operations costs for corporations. According to Gartner, the total cost of ownership associated with procuring, owning, supporting and disposing of a desktop can range anywhere from $4,000 to $11,000 per desktop, per year.

Industry watchers say Symantec and competitors such as Altiris, Computer Associates, IBM Tivoli and LANDesk have been incrementally merging systems and security management tools, especially those dealing with desktops, which in large organizations can reduce manual maintenance tasks and duplication of efforts.

"The suite combines all these different desktop tasks together with a straightforward process flow that can cross organizational boundaries — for example, security and PC administration," says Jasmine Noel, a principal analyst with Ptak, Noel & Associates. "Enterprise companies are realizing that treating PC management as individual tasks takes a lot of manual effort that has to be duplicated with every new project. With clear policies and processes, the odds of automation and optimization are much better so it becomes cheaper to manage thousands of PCs at a time."

LiveState Client Management Suite is expected to be available in the next two weeks. Pricing for the suite starts at about $150 per seat with a 10-seat license. Standalone software applications are also set for availability. LiveState Delivery costs about $80 per seat with a 10-seat license. LiveState Patch Manager is priced at about $20 per seat with a 10-seat license, and Discovery costs about $35 per seat with a 10-seat license. All licenses come with a one-year service contract. ■



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Politics, policy and pragmatism

EYE ON THE CARRIERS
Johna Till Johnson

Every now and then, readers comment on a column they think is "too political," or that they believe stems from a particular political bias on my part. In these polarized times, that belief is understandable. But it's generally a mistake.

For one thing, folks who think they can easily categorize my politics might be in for a surprise. As I've told a few readers directly, I'm a churchgoing, gun-owning, free-market-supporting, civil libertarian. I've voted both Democratic and Republican (and have voted a split ticket in most recent elections). Regular readers know that I grew up in a military family and have a deep respect for the U.S. armed forces (although I know the military is often called on to support controversial policies).

I read both *The New Republic* and the *National Review* (plus *The Wall Street Journal* and my hometown paper). I've been both a union member and a serial entrepreneur who's helped create hundreds of jobs. Over the years, I've both supported and opposed various flavors of government intervention and investment.

In short, you and I can probably find many significant issues to agree on (or if you'd prefer, to disagree over).

But more importantly, if I have an overarching bias, it's toward pragmatism. I'm an engineer by training and temperament. I favor things that can demonstrably be shown to work (as opposed to things that merely fulfill someone's ideological framework).

That's the real reason it's a good idea to avoid political pigeonholing: Sometimes people on the other side of the political divide have ideas that actually work.

Take telecom policy. My friend and colleague K. Claffy recently asked me to provide examples of cases in which government regulation inhibited innovation and competition, and cases in which the free market inhibited innovation and competition. I listed several in both categories — and cases in which telecom and communications regulations actually encouraged innovation and competition. (Details in upcoming columns.)

In short, there's no one-size-fits-all philosophy or ideology that leads to the creation of perfect telecom policy. For pragmatists like me, neither government intervention nor an unfettered free market is ipso facto the right (or wrong) answer. Each can work: Government funding created one of the greatest communication innovations in modern history (the Internet) — and the free market transformed it from a feat of engineering into an economic force.

Now we're at a critical inflection point in telecom policy. Deregulation of the old Bell system, the maturation of the Internet and the rise of new technologies and models such as VoIP, satellite services and Wi-Fi municipal networks means it's a whole new world out there. If you agree that the best policies are those that are actually effective at accomplishing their goals, then it's time for a pragmatic look at what does and doesn't work. Stay tuned!

Johnson is president and chief research officer at Nemertes Research, an independent technology research firm. She can be reached at johna@nemertes.com.

Short Takes

■ **New Edge Networks** last week announced that it upgraded its North American broadband network, which supports DSL, ATM, frame relay and IP services, with Multi-protocol Label Switching gear from Alcatel. The privately held carrier would not say how much it has invested in its Big Foot project.

■ A new IDC report says U.S. carriers are bringing in a nice chunk of change from **wireless data services.** The consulting firm says consumers and business users spent $1.6 billion on wireless data services in the fourth quarter of 2004. That represents a 20% growth rate over the third quarter. Of the $1.6 billion, $810 million stemmed from messaging services. Cingular Wireless, the largest wireless service provider in the U.S., brought in the most in wireless data service revenue followed closely by Verizon Wireless.

Verizon: Out with Wi-Fi, in with EV-DO networks

■ BY JIM DUFFY

Word from Verizon that it plans to decommission the hundreds of free Wi-Fi hot spots it turned up in New York City two years ago has some observers suggesting that demand for such public wireless services is limited.

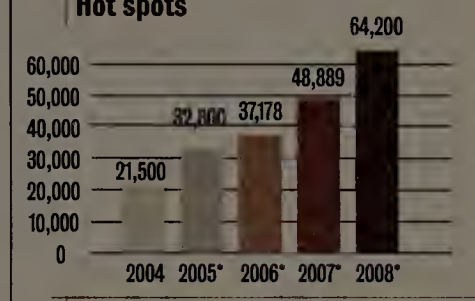
"This may be the beginning of the end," says Bob Egan, president of consulting firm Mobile Competency. "It's very much a niche application.... In terms of hot spots as a primary source of revenue, nobody's making money and they're not going to."

Wi-Fi service doomsayers acknowledge that hot spots will have their place at certain retail establishments, airports and other venues. After all, the number of hot spots is expected to grow over the next few years (see graphic). But they say public Wi-Fi, which operates in unlicensed radio fre-

See Verizon, page 30

Hot or not?

The number of hot spots in the U.S. is set for strong growth although Wi-Fi services usage is expected to pale in comparison to that of Frame, IP and other services.



Compound annual growth rate: 31.5%
* Projected
SOURCE: TIA

AT&T rolls out hosted IP PBX service at Interop

■ BY DENISE PAPPALARDO

AT&T last week announced a suite of IP services that will include voice, conferencing, messaging and video.

The first of its Dynamic Network Applications is AT&T Voice DNA, a network-based, hosted IP PBX service similar to traditional Centrex offerings that the local exchange carriers have offered for years.

AT&T, which introduced the offerings at Interop in Las Vegas, hinted about its plans last month. Voice DNA will let users upgrade to an IP PBX environment without having to deploy or manage voice switches on-site. The service offers an automated attendant, locate-me feature, the ability to have multiple phones ring for one user, on-demand audioconferencing and integration with Microsoft Outlook.

One of the key options is an Any Distance calling plan, which provides users with VoIP end-to-end. This is the first time AT&T is offering business users local VoIP support, says Joe Aibinder, director of VoIP services.

AT&T is using gateways it already had deployed through 100 markets across the U.S. to support its consumer VoIP service, AT&T CallVantage, to also support local VoIP traffic for business users.

Using VoIP end-to-end can save some customers up to 20% compared with legacy local and long-distance voice services, Aibinder says.

The Any Distance calling plan includes unlimited, on-net, local and long-distance calling. This plan is only for users within the 100 markets where the carrier has local facilities.

Regional businesses also can select AT&T's local calling plan option or its long-distance-only plan, which includes unlimited on-net, and competitive long-distance and international rates.

The Voice DNA service supports IP phones from Cisco, Polycom and others, as well as softphones from a handful of vendors, the carrier says.

Voice DNA starts at $10 to $20 per month, per line. ■

Special Focus

WIRELESS: Telephony system integration strategies.

Unplug and play: Uniting mobile devices, PBXs

■ BY DENISE PAPPALARDO

As a mobile device user, do you have desktop phone envy?

Sure, going mobile spells freedom, but it also often means giving up traditional PBX-based phone system features such as abbreviated dialing, call transferring and multiparty teleconferencing.

Ford, for example, is ditching 8,000 landline, desktop phones in favor of wireless devices, but has no plan yet to integrate those devices with the company's PBX or new IP PBX (see www.networkworld.com, DocFinder: 7031).

PBX makers are working to address such situations by extending their products to embrace wireless devices, but don't look for much in the way of new offerings until later this year. Meanwhile, a group of lesser-known companies is bridging the gap between mobile users and back-end phone systems with new products and services.

> **"Today, users need specialized applications that work through their PBX and some are expensive."**
>
> **Philip Redman**
> Research vice president, Gartner

"Today, users need specialized applications that work through their PBX, and some are expensive," says Philip Redman, a research vice president at Gartner.

Early players

Early players in the mobile-PBX integration market include Ascendent Systems and Orative, whose offerings work across different vendors' PBXs and mobile devices.

"There are 50 to 100 billion installed PBXs in the world," says Ascendent Vice President of Marketing Walt Blomquist.

Ascendent's PowerConnect server-based software sits behind the firewall and in front of the PBX, delivering traditional PBX features such as four-digit dialing, transferring calls, putting calls on hold and direct access to corporate voice mail to users' wireless devices. No client software is required.

PowerConnect also acts as a back-up system. If a company loses its phone lines because of a fiber cut, for example, the Ascendent system can forward calls to users' wireless phones or landline phones outside of the office. To exploit this, companies need to work with their local service provider to set up a separate fiber line to reroute calls to an Ascendent server.

This back-up feature sold Claymore Securities on Ascendent. The Lisle, Ill., financial services company deployed PowerConnect as part of its business-continuity plan, says Gregory Miller, manager of IT.

Claymore's management team initially balked at making PowerConnect part of the company's disaster-recovery plan. But Miller says the day after he pitched management on the system, a fiber cut outside the building convinced management to reconsider.

"I got someone from our leadership team to look out the window. I told him we were four inches from losing our telecom service today," Miller says.

Users can buy PowerConnect based on a three-year or perpetual license. Ascendent charges $5 per month, per user for 1,000 users for a three-year license. A perpetual-term license costs about $250,000 for 1,000 users.

Another offering comes from Orative, a three-year-old company that launched its Enterprise Server in March. Server software communicates with a company's traditional or IP PBX switches, while client software installs on wireless devices running common mobile operating systems.

Features include a phone book that lets end users select group directories from larger corporate directories and download them onto their wireless phones.

The software also offers security in that if end users lose their phone, sensitive corporate data on the device can be deleted remotely.

Cisco has been testing Orative Enterprise Server internally, but it is not a paying customer. One IT manager at the company, who asked not to be named, says Orative's directory feature "allows users to feel like they are part of a worldwide team regardless of where they are."

The phone book also has a presence-aware feature that lets users see if employees they are looking to call are available.

A notification feature lets end users send reminders or meeting requests to individuals or user groups through the Orative portal, which is part of the server. By integrating an Orative server with current Exchange or Domino servers, end users also can have reminders from their personal calendar sent directly to their wireless device.

Cisco especially likes Orative's security features. "If an employee loses a phone or it's stolen, with a push of a button all of the information on that phone can be destroyed. That's very valuable for a company like ours that supports about 80,000 phones a year," the IT manager says.

Orative's software starts at $5,000 for a server, plus $2,500 for a Client Access License Starter Pack that supports 25 users.

On the horizon

Customers seeking wireless-to-PBX integration might soon also be able to go the services route.

BroadSoft recently rolled out an application that the company says will let wireless service providers make available Centrex-like offerings to business customers. Services could include features such as auto attendant, call center functionality, abbreviated dialing and instant messaging. BroadSoft says it is in talks with service providers in the U.S., Europe and Asia, but isn't naming names.

Companies looking for a product from their current IP PBX vendors will likely have to wait until at least the third quarter, when Avaya plans to deliver (DocFinder: 7032).

Avaya announced in March that it is developing Communications Manager software that will be part of its MultiVantage Communications Applications suite that will let users port PBX features to specific wireless devices. Initially, Avaya's system only will work with Nokia Series 60-based wireless devices running SymbianOS. Gartner's Redman says Avaya also is working with Motorola and plans to expand the list of wireless devices its system will work with.

The drawback to Avaya's planned offerings is that they only will work with its own products.

Gartner's Redman says he expects Cisco, Nortel and Siemens to offer similar features by mid-2006. ■

Verizon

continued from page 29

quency spectrum, does not appear poised to become a strategic-business, remote-access service.

"Hot spots are more of a social gathering application with low security," says Larry Swasey, a senior analyst at Visant Strategies. EV-DO "brings in more users, and it's a more secure environment."

Cellular data services such as 2M bit/sec EV-DO and the 14.4M bit/sec High-Speed Downlink Packet Access, although slower than Wi-Fi, have far wider coverage, enable roaming and operate in licensed spectrum less susceptible to interference.

EV-DO is where Verizon is placing its bets. The carrier, which had initially planned to turn up 1,000 Wi-Fi hot spots in New York by the end of 2003 for its DSL customers (see www.networkworld.com, DocFinder: 7034), is now steering mobile business customers to its cellular EV-DO BroadbandAccess service, which costs $80 per month.

"Wi-Fi was a stopgap for them before they could get [EV-DO] out," Egan says.

The business model for Wi-Fi services — offering speeds up to 54M bit/sec within a 300-foot radius of an access point — has been elusive for carriers. Potential users have been turned off by the pricing structure for access as well as spotty coverage and limited roaming (DocFinder: 7035).

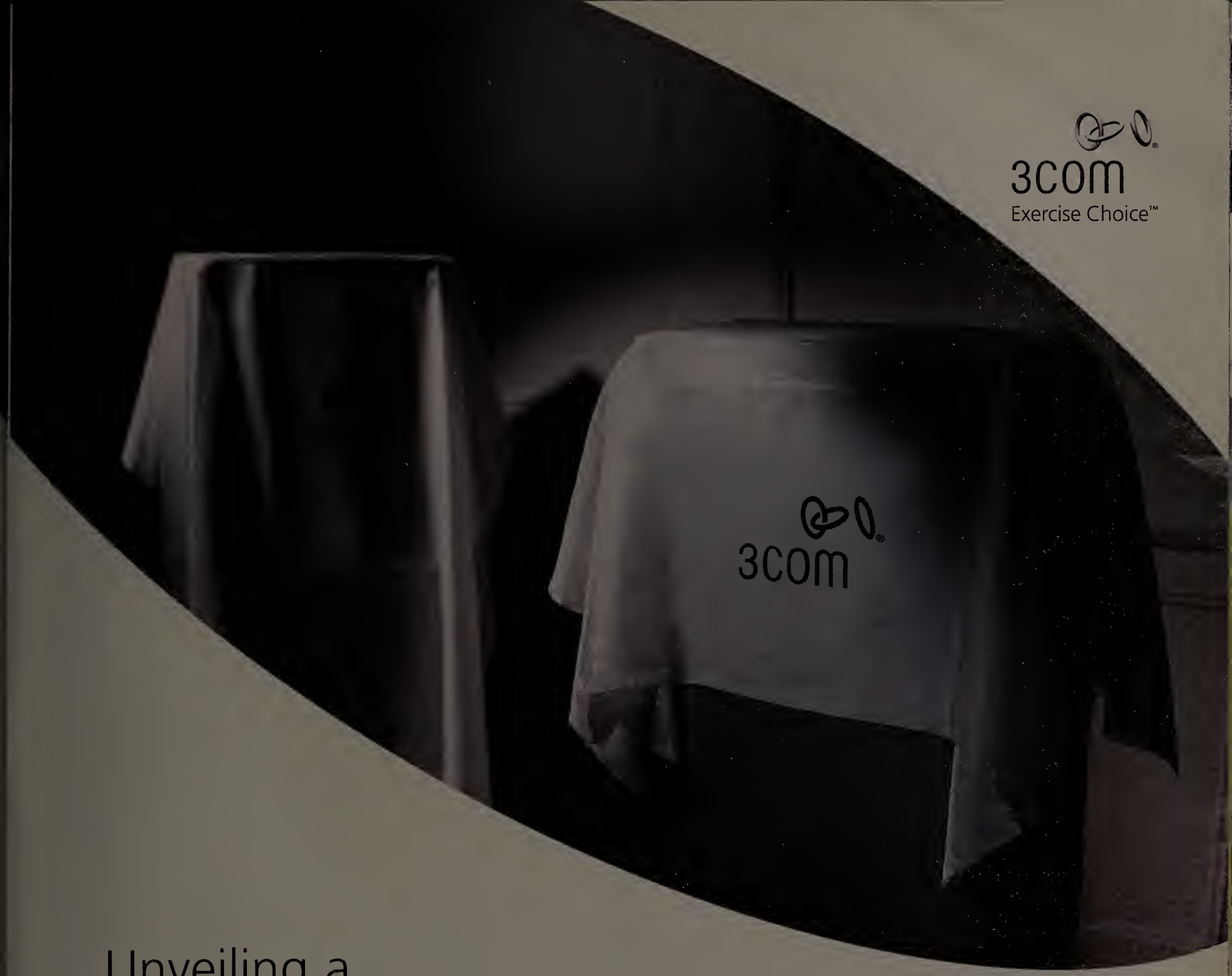
Not that this is stopping Sprint, which recently said it has added 5,000 hot spots to bring its total to 19,000, and has another 6,000 planned by year-end (DocFinder: 7036).

For Verizon, hot spot service didn't generate demand — less than half of the 380 hot spots it is decommissioning generated more than 80% of the traffic.

"Usage didn't live up to our expectations," a Verizon spokesman said. "Customers didn't take advantage of it."

Also on the horizon is WiMAX, which can transfer around 70M bit/sec over a distance of 30 miles to thousands of users from one base station. Carriers, including Verizon, are in various stages of trial with WiMAX gear, and services are expected to debut within the next two years.

"When you come along into an area like WiMAX, it may be that the balance is restored because you're going to have licensed spectrum, you're going to have a greater range, and carriers will have more control over behavior and revenue potential," says Thomas Nolle, president of consultancy CIMI. ■



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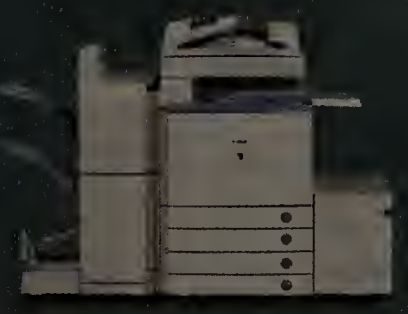

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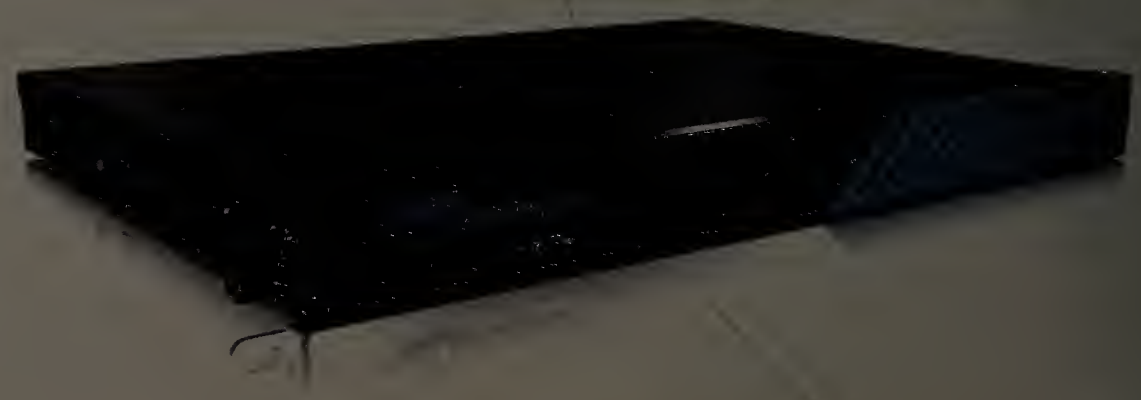

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Technology Update

■ AN INSIDE LOOK AT TECHNOLOGIES AND STANDARDS

IPMI V2.0 simplifies server mgmt.

■ BY MARCIO SAITO

The need to reduce the complexity of IT infrastructure management remains a priority on every IT manager's agenda. One of the most prominent open standards addressing that need, Intelligent Platform Management Interface, has been adopted by more than 150 server technology vendors to provide remote access, monitoring and administration for servers and other hardware assets.

Version 2.0 of the IPMI specification is now supported on many rack-optimized servers and blade computing platforms. Servers with IPMI functionality let network administrators access and monitor server hardware, and diagnose and restore a frozen server to normal operations.

IPMI defines the protocols for interfacing with a service processor embedded into a server platform. This service processor is called a baseboard management controller (BMC) and resides on a server motherboard or on the chassis of a blade server or telecom platform. A BMC links to a main processor and other on-board elements using a simple serial bus.

Service processors monitor on-board instrumentation (such as temperature sensors, CPU status, fan speed and voltages), provide remote power control capabilities to reboot a server, and include remote access to BIOS configuration and operating system console information. Because a BMC is a separate processor, the system works whether a main processor is operational or not.

An administrator accesses a BMC by using an IPMI-compliant management application loaded on a desktop or remotely via Web interface on an out-of-band appliance that includes IPMI management firmware.

During normal operations, IPMI lets a server operating system obtain information about a system's health and control system hardware. For example, IPMI enables the monitoring of sensors (such as temperature, fan speeds and voltages) for proactive problem detection. If server temperature rises above specified levels, the server operating system can direct the BMC to increase fan speed or reduce processor speed to address the problem.

IPMI also can operate out of band (independent of a production IT network) to let an external agent monitor system health and control hardware status. IPMI messages follow the same format whether they are received through an operating system or are sent and received out of band. Most of the operations involve sending a command to a BMC and receiving a response with the information requested.

Version 2.0 of the IPMI specification supports Serial over LAN to redirect serial console functionality into IPMI over IP. Administrators gain full remote access to text-based system information, and control for BIOS, utilities, operating systems and applications. Before Version 2.0, this access was limited to serial consoles via secure console servers.

IPMI Version 2.0 also offers major security enhancements:

- Enhanced authentication support that provides stronger processes for establishing secure remote sessions and authenticating users.
- Enhanced encryption support that allows for secure remote password configuration and protects sensitive systems data during any transfer through Serial over LAN.
- A firmware firewall, a collection of commands that prevent the execution of predefined activities that could place the system at risk.

Despite these advances, many corporations still do not use IPMI functionality, even when it is included on installed servers with IPMI Version 2.0 BMCs. One key factor that prevents widespread adoption of IPMI is its lack of support for enterprise security protocols.

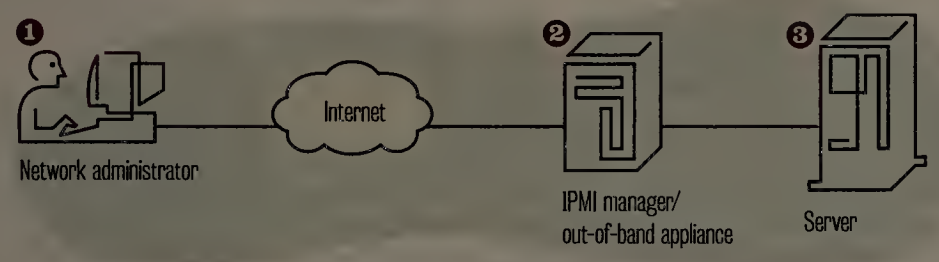
Most likely, the next major IPMI release will include enterprise security support. Meanwhile, IT executives must choose between developing a separate security system for IPMI or deploying an out-of-band appliance with IPMI management firmware that supports enterprise security architecture. Regardless, IPMI Version 2.0 presents new ways to reduce the cost and complexity of IT infrastructure management.

Saito is CTO at Cyclades. He can be reached at marcio.saito@cyclades.com.

■ HOW IT WORKS

Intelligent Platform Management Interface

IPMI Version 2.0 defines the protocols for interfacing with a service processor embedded into a server platform. It allows an off-site administrator to monitor system health and control hardware status, such as rebooting a server.



1. Administrator connects via Web or LAN to IPMI manager, which may be integrated in an out-of-band appliance.
2. IPMI manager uses IPMI over IP to connect to baseboard management controller (BMC), which resides on server motherboard.
3. BMC connects to sensors, redundant power, CPU, BIOS and operating system console via a system bus. Administrator can monitor temperature, fan speed, voltage, CPU speed, BIOS and operating system console messages, or reboot the server.

Got great ideas?

■ *Network World* is looking for great ideas for future Tech Updates. If you want to contribute a primer on a specific technology, standard or protocol, contact Amy Schurr, senior managing editor, features (aschurr@nww.com).

Ask Dr. Internet

By Steve Blass

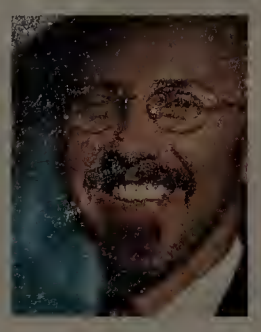
We have Apache and Internet Information Systems Web servers. The Apache server has an SSL certificate from VeriSign installed. The IIS server has a self-signed SSL certificate. We want to make the SSL security alert from the self-signed certificate on the IIS server go away without having to buy another commercial SSL certificate. Can we drive all the SSL traffic through the Apache server to avoid the SSL security alerts?

The Apache modules mod_proxy and mod_rewrite can be configured so client browsers will talk to your IIS server through the Apache server. This will establish the SSL connections using the commercial SSL certificate, eliminating the browser security warning. Add the statements "ProxyPass /mywebfolder https://iis.server.name/myweb folder" and "ProxyPassReverse /mywebfolder https://iis.server.name/mywebfolder" to your Apache httpd.conf file, and then point a browser at the address in https://apache.server.name/mywebfolder, to view IIS content through the Apache Web server connection. Add the command "ProxyRequests off" to the httpd.conf file so the server will not honor proxy requests from browsers except to connect to your IIS server.

Blass is a network architect at Change@Work in Houston. He can be reached at drinternet@changeatwork.com.

GEARHEAD INSIDE THE NETWORK MACHINE

Mark Gibbs



More on machine names and spam

Well, we had lots of feedback on the topic of naming servers and PCs after our column of a few weeks ago. Reader Kes Masalaitis wrote, "we got our first RISC machine, which was way faster than the CISC machines we had. I was the sysadmin, and I named the machine 1fastmf. I also named a machine xlr8."

An astronomical theme has been the choice of many organizations. Reader Mike Palombo said, "Our organization named our first eight servers after planets — we were told to skip Uranus ... they wanted to avoid announcements ... such as: Uranus will be down for an hour [and] there's a tape stuck in Uranus."

Reader Chip Orr wished his employer didn't require the use of "functional" host names "like RBSMADECWS058, which only makes sense if you know our organizational and building codes."

Chip also wrote that, "years ago I stumbled upon several amusing host names used by the respiratory sciences department at a medical school. They had hosts named 'mucous,' 'phlegm,' 'tuberculosis,' etc. Their naming convention cracked me up, although I also felt the need to wash my hands after accessing any of their systems."

Dan Wakeman confessed that, "In my first job out of college I inherited a NetWare 3.10 server named Elmer, as in Fudd. It was a no-name brand and had been set up by one of the programmers. That server gave us grief on and off for months. My boss ... said 'Dan, we've got to change the name of the server. We're having cartoon calamities.'"

Reader Michael Miller said his company's naming scheme "isn't terribly innovative — in fact, it's mentioned in RFC 1178. I use element names for systems that aren't exposed to the outside world."

Michael pointed out that the scheme has a couple of advantages: "First, each name is tied to a number, which becomes part of the IP address of the system. For example, hydrogen could be 10.0.0.1 and berkelium could be 10.0.0.97. That means I don't need to carry around a list of host names and their IP addresses, or be able to reach NIS, LDAP or even a host file. I've got a periodic table on my desk and one on my PDA, but I find I don't need them much anymore."

The second advantage is "the names don't have any inherent meaning with respect to usage, but there are groupings available for uses: noble gases, lanthanides, actinides, number of valence electrons, etc."

Michael pointed out that "the biggest downside is that some of the elements have names that annoy some spelling-challenged users. I might argue that this is a feature."

We'll wrap up this week with an anti-spam utility we've been running for a couple of weeks called Qurb from Qurb, Inc.

Qurb is a challenge/response system for Outlook and Outlook Express that prevents "unapproved" senders' e-mail from appearing in your in-box until they do nothing more complex than respond to a challenge message.

The first time Outlook or Outlook Express is launched after installing Qurb the program will scan all messaging-related folders, excluding any unread in-box messages (they could be spam) and any folders with names containing the words "junk," "deleted" or "spam." The result will be a list of your approved senders.

After that, any messages received from unapproved addresses will be redirected to your Qurb quarantine folder and a challenge will be sent back in reply. You can set the frequency at which Qurb alerts you to check the quarantine for senders who you want to get messages from but for whom you haven't yet responded to a challenge. This is important because mail lists and automated responses usually won't reply.

As soon as a response to a challenge is received, Qurb releases the original message from quarantine and moves it to your in-box. You can select messages from senders you'd prefer to have blocked and click on the "Block" button in the Qurb toolbar. Likewise, you can approve senders by using the "Approve" button.

Qurb also includes a search feature that blows away Outlook's search function. While this facility doesn't offer the range of searching that some other products provide, we find that it is more than enough for most of the "where on earth did we put that message" moments we have.

Qurb works very well and appears to be making a significant impact on our huge spam problem. Qurb is a steal for $30.

Talk to us at gearhead@gibbs.com. And don't forget Gearblog (www.networkworld.com/weblogs/gearblog).

CoolTools

Quick takes on high-tech toys
By Keith Shaw

D-Link expands Internet camera line

At Interop last week, D-Link Systems showed off its newest network camera, the SecuriCam Internet Camera (DCS-6620G). With features such as 10x optical and digital zoom, pan and tilt, a charge coupled device processor and a fine-ground glass lens, the camera produces live streaming video that can be accessed via a Web browser, D-Link says. It also supports 802.11g wireless LAN connectivity, which let users place the camera in locations away from an Ethernet port (the only location requirement is a power outlet).

Pricing and availability for the DCS-6620G was not announced.

The SecuriCam Internet Camera lets you access streaming video via a Web browser.

IOGear launches Powerline adapters

IOGear said last week it is getting into the power-line networking market. The company launched its Powerline Networking Kit, a set of adapters that connect to a 10/100M bit/sec Ethernet network to provide network access through power lines within the home. The adapters include support for 56-bit DES encryption, bandwidth up to 14M bit/sec and a range of 990 feet, IOGear says.

The kit costs about $100 and is available now from catalog resellers, online resellers and some retailers. More information is available at the IOGear Web site.

InFocus' X3 projector can be accessed securely via wireless instead of cable.

APC combines mouse with fingerprint scanner

American Power Conversion (APC) last week launched its Biometric Mouse Password Manager, an optical mouse that includes a fingerprint scanner to let PC users manage their passwords. The device costs $60 and is available now in North America.

The system lets a user log on to his PC or notebook with his fingerprint. It stores all of a user's passwords so he doesn't have to memorize a number of different passwords for Web-based logons, APC says. The software lets users store fingerprints of up to 20 users on one computer, comes with a 6-foot USB cable, and is compatible with Windows 98, ME, 2000 and XP systems. The device can store an unlimited number of usernames and passwords, and provides one-touch file or folder encryption with five encryption algorithms.

InFocus projector targets business, home use

InFocus is aiming its new X3 projector at business users who need a presentation device by day and a way to display movies or play video games at home at night. The X3 will be available later this month for about $1,200, the company says.

The 6.8-pound projector offers 1,600 lumens of brightness, a 2,000:1 contrast ratio and native XGA resolution. It includes DarkChip2 DLP technology from Texas Instruments, which aims to provide better video quality when displaying a DVD or watching a television show through the projector, InFocus says. With the InFocus LiteShow system, users can securely access the projector wirelessly instead of using cables.

Cingular ships 'world's smallest' smart phone

Cingular Wireless last week announced the availability of the Audiovox SMT 5600 Smartphone, which it says is the "world's smallest Windows Mobile-based" smart phone. It is available in select markets for about $200 (with a two-year voice and data service contract), the company says.

The 3.6-ounce phone lets users access Outlook applications such as contacts, calendar and e-mail. It includes over-the-air synchronization of personal information manager functions, supports up to nine e-mail accounts (POP3 or Internet Message Access Protocol 4 mail), and includes the Microsoft .Net Compact Framework, which helps IT mobilize current Microsoft-based applications, Cingular says.

Other features include 32M bytes of internal RAM, an integrated digital camera/video camera (VGA resolution and 4x digital zoom), Bluetooth and infrared support, speaker phone, and a Windows Media Player 10 Mobile to let users listen to music. The device includes a built-in mini-Secure Digital slot so users can expand memory or store additional images, music or video files.

Shaw can be reached at kshaw@nww.com.

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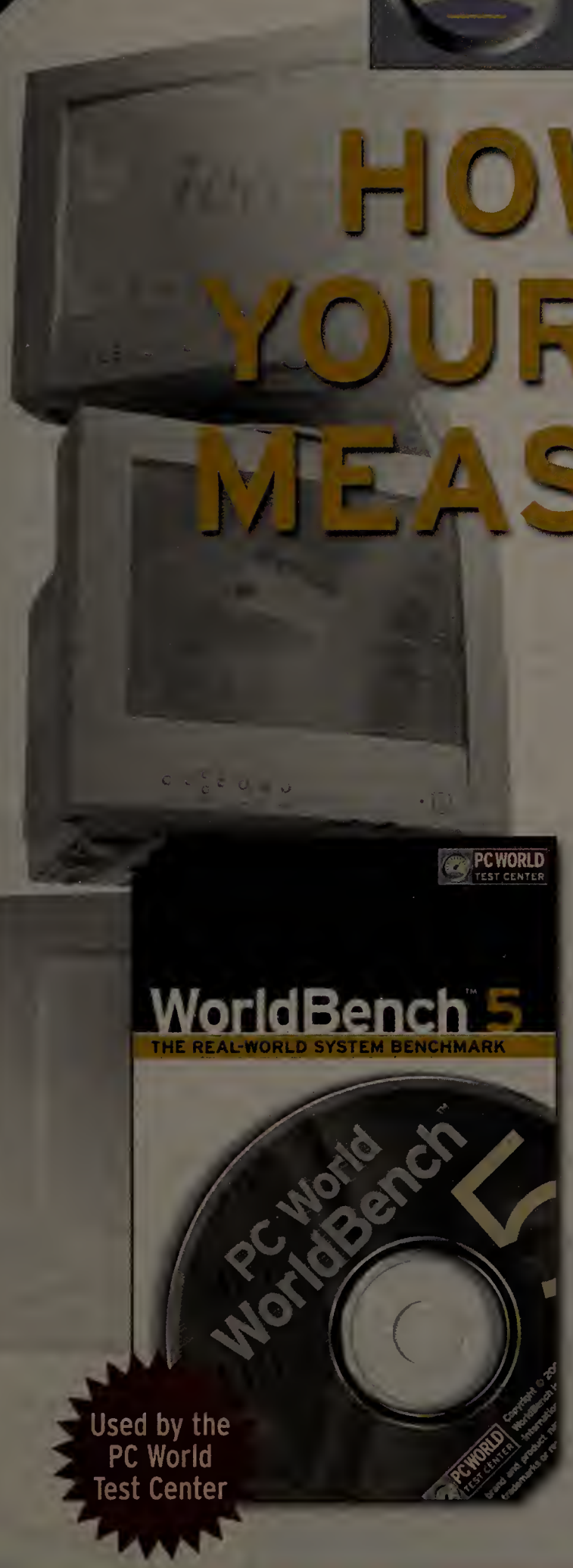

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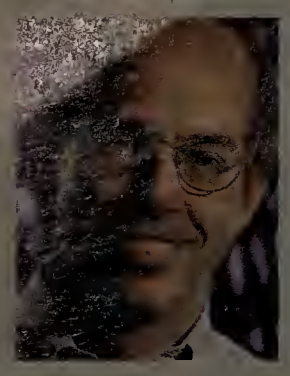


ON TECHNOLOGY

John Dix

Interop: Same topics, new twists

Although Interop boasted a new name and was hosted in a new venue, the hot issues at the show last week were largely the same as last year: convergence, security and wireless.

The conference returned to its roots by dropping "NetWorld" from its name and shifted out of the cavernous Las Vegas Convention Center to Mandalay Bay's convention facilities, which better suited the show at its current size — 300-plus vendors, a fraction compared with when it filled two huge halls across town.

But attendee traffic was thick, and vendors were pleased with the buyers they were seeing. In fact, show organizer MediaLive is confident enough in the show's direction to make another go at the East Coast: It announced it will stage another Interop this December in New York. The last East Coast Interop was in Atlanta in 2001.

One of the standouts at this year's show was the Session Initiation Protocol (SIP) interoperability demonstration. The InteropNet Labs VoIP network linked SIP gear from 25 vendors and supported four-digit-extension dialing. At the heart of the network were SIP proxy servers from eight vendors, including Avaya, 3Com, Zultys, PingTel and Nortel (see www.networkworld.com, DocFinder: 7049).

Despite the achievement — a compelling example of what SIP can do — convergence vendors at the conference seemed more interested in talking about VoIP over Wi-Fi. Siemens, for example, rolled out HiPath Wireless, a family of wireless LAN products based on its acquisition of Chantry Networks, that it is positioning as ideal for both voice and data.

As part of that announcement Siemens also showed a slick, well-designed Wi-Fi phone called OptiPoint that will be available in August for $495. The SIP-based phone apparently will work on any 802.11 infrastructure.

While security vendors were also in abundance at the show, one booth demonstration that was eye-catching was by Solsoft, which offers a tool that can be used to automate the configuration of security devices.

In the demo, the product's graphical interface was used to draw a line between a branch office and a finance Web portal. The tool then compiled the changes necessary for the Juniper NetScreen, Cisco PIX and Cisco routers to make the link possible, and pushed the changes through.

You can do in 5 to 10 minutes with Solsoft what would take you 1.5 hours to do manually, Solsoft says. The company, which says it has 200 customers, supports equipment from Cisco, Juniper, Check Point, Nortel, Symantec, Internet Security Systems and others.

These are the kind of advances that get attention.

— John Dix
Editor in chief
jdix@nww.com

Driven to distraction

Your story on wireless communications while driving (www.networkworld.com, DocFinder: 7027) is extremely appropriate these days. I fear the day will come when I see more drivers talking on cell phones while driving than not. Using hands-free devices only solves part of the problem. It does nothing to resolve the issue of drivers' concentration and awareness of what is going on around them.

I agree that mobile communication makes us more effective and is a good thing. I believe, however, that communications while driving a car, even with hands-free devices, should be permitted only in emergencies. This can be enforced by, for example, extending the GPS capabilities of modern phones to disable outward and inward connections except for 911 calls at speeds faster than 30 mph.

Bill Stevens
Columbus, Ohio

The FCC's real issues

I want to thank Johna Till Johnson for her column on how incoming FCC Chairman Kevin Martin might best spend his time (DocFinder: 7028). Indecency regulations make good headlines, at least as long as the public's attention span holds out, but there are far more important issues for the FCC to decide

I'm especially concerned about how the first and third points Johnson raised intersect: Is it necessary for a "telecom carrier," whatever that is, to give fair service to all packets offered by all its customers? ISPs are commercial entities with a vested self-interest, and some of them may want to offer self-branded or self-produced VoIP service to their end users. OK, so you pay them some pitiful amount per month to shoot any packets you want through their network to anywhere you want, and it just happens that some of the packets represent a VoIP conversation. Is it illegal, immoral, or just mean-spirited and self-serving to subtly delay those packets, making your competitor's service look worse? What constitutes "best-effort" service? Should you have to pay extra to not have your VoIP packets sent to the back of the line, or is that essentially extortion? What's the difference between that and paying an extra fee to have your VoIP packets sent to the front of the line?

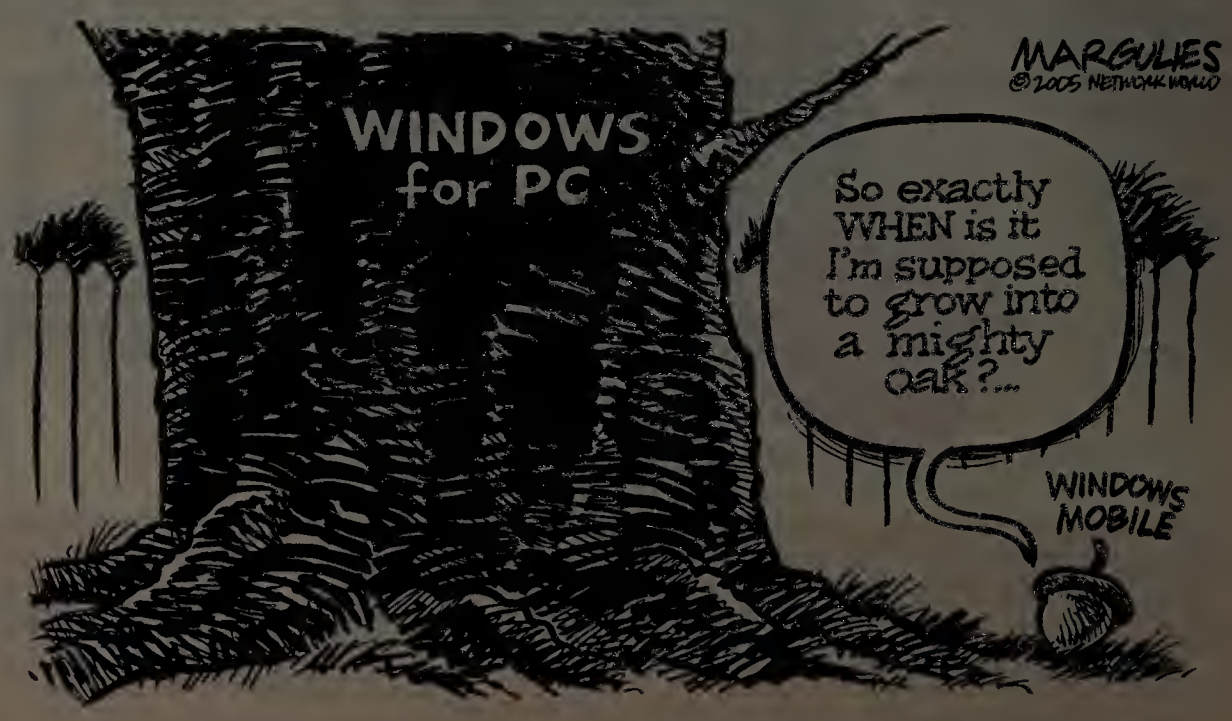
This discussion came up a few years ago when various big ISPs started blocking outbound access from dial-up and broadband customers to any SMTP servers on the outside of the ISPs' own networks — that is, customers would have to send outbound SMTP through the ISPs' own servers, not their "preferred" home base server. This annoyed some customers because their roaming laptop e-mail configurations stopped working, and some business customers probably had to negotiate exceptions to the blocking lists for their own small mail servers (or had to start contracting with the ISP for permission to even have a small mail server). But many others in the industry celebrated because this sort of blocking cuts down on the spread of spam and viruses that attempt to mail directly to the remote machine. Eventually the dust settled, and customers got used to it. Will VoIP present similar challenges for customers to just get used to?

The discussion is especially interesting because of a recent study that showed the normal, best-effort service in today's commercial Internet is actually good enough to support voice most of the time. So if the ISPs make excuses that the Internet just can't do it reliably, but somehow their own branded VoIP services work fine, it's going to look disingenuous.

Jeff Saxe
Network engineer
Crutchfield
Charlottesville, Va.

E-mail letters to jdix@nww.com or send them to John Dix, editor in chief, Network World, 118 Turnpike Road, Southborough, MA 01772. Please include phone number and address for verification.

More online! www.networkworld.com Find out what readers are saying about these and other topics. **DocFinder: 7021**



USER VIEW

Chuck Yoke

So where is all the IPv6?

Five years ago, I wrote a column questioning the need for IPv6 because I felt IPv4 was more than adequate. Two years later, I wrote another column basically saying the same thing — which did nothing to endear me to the IPv6 contingent. Then last year, my interest in IPv6 heightened, and I wrote a column recommending that users consider IPv6 for any new implementations.

Now, one year later, I gaze across the network horizon and ask, So where is all the IPv6? Even with all the hype about IPv6, I know of very few implementations outside of educational institutions, the federal government, telecom companies or research organizations. In the corporate world, IPv4 remains king. And from what I can see, it will remain king through this decade.

That doesn't mean IPv6 is dead. Eventually, most companies will be forced to switch to IPv6 because of vendors eliminating IPv4 support. While IPv6 has definite technical advantages, the business value and functionality doesn't justify the conversion costs.

The increased availability of WAN technologies such as Border Gateway Protocol-based Multi-protocol Label Switching (MPLS) VPNs facilitates the continued use of both IPv4 and private IP address spaces. The highly touted increased address space of IPv6 still is not critical to most corporations. IPv4-based technologies such as IPSec, SSL, MPLS, Differentiated Services and router-based queuing mechanisms adequately match the security and quality of IPv6 service enhancements.

From an application perspective, IPv6 actually can create problems. While operating system vendors are shipping IPv6 stacks and IPv6 versions of HTTP and FTP, most off-the-shelf applications are not IPv6-based and might require the use of tunneling or other modifications to work properly in an IPv6 environment. This only adds to the cost, complexity and service issues of an IPv6 migration.

As most corporate IT organizations are cost centers constantly under pressure to reduce expenditures while increasing service, IPv6 still is seen as a solution looking for a problem. A migration to IPv6 will neither reduce near-term operational costs nor enhance functionality. On the contrary, migrating to IPv6 will create short-term cost increases and might affect service because of training, support and implementation issues. Budgetary-constrained IT managers are opting to invest their dollars in other initiatives that will solve immediate problems.

While IPv6 might never be "required," I think it will replace IPv4 when the economics are right. Most new equipment supports IPv6. IT managers are laying the foundation for the eventual migration to IPv6 as they replace their fully depreciated legacy routers, switches, desktops, servers and operating systems through normal end-of-life processes. Within five years, most corporations will have an infrastructure capable of supporting IPv6. At that time, the transition to IPv6 will become a "no-capital" tactical initiative that will be more financially palatable to corporate management. Until then, IPv4 will continue to reign supreme in the corporate world, providing cost-effective networking services and functionality.

Yoke is director of business solutions engineering for a corporate network in Denver. He can be reached at ckyoke@yahoo.com.

While IPv6 has definite technical advantages, the business value and functionality doesn't justify the conversion costs.

CACHE ADVANCE

Linda Musthaler

E-mail snooping: A smart strategy

Last week I was drawn into a conversation between two women who happened to be small-business owners. One woman was telling the other how her husband occasionally looks at their employees' e-mails. Her mention of this almost sounded like a confession — like her spouse and business partner was guilty of something he shouldn't be doing.

I told both businesswomen the company owner not only has a right to look at the e-mail but also is wise to do so from time to time. Reviews of messages in a company-provided e-mail system can reveal misuse of company resources, theft of intellectual property or other concerns. What's more, the contents of e-mail messages can be subpoenaed in the event of a lawsuit, so the business owner or executive team should know what's going through company systems. Consequently, many employers — large and small — screen employees' messages today.

Just ask Harry Stonecipher, whose reign as CEO of Boeing ended when his grievous misuse of the corporate e-mail system was revealed to the board of directors. It seems Harry unwisely chose to send sexually explicit notes to a secret paramour who also worked at Boeing. Given that Stonecipher was supposed to be leading the charge to a more "morally proper" company, the board had little choice but to fire him as an example for all other employees.

He isn't the only person to assume e-mail content is private. Many employees make that assumption, but experts on labor issues say employees have no right to privacy when it comes to communications using company systems such as e-mail, instant messaging, telephones and fax machines. However, it's important to fully inform employees of the company's policy regarding the use of such resources.

Does your organization have a published policy on the use of your e-mail system, and do you adequately train employees on that policy and what is acceptable use of e-mail? According to a 2004 survey conducted by the American Management Association and The ePolicy Institute, 79% of the 840 responding companies say they have a written policy governing the use of e-mail. However, only 54% of the surveyed companies conduct e-mail policy training.

The survey also revealed that most companies monitor the content of incoming and outgoing e-mail. However, only 27% of the companies monitor the content of e-mail flowing within the company, where familiarity might lead to passing around inappropriate content.

Companies that don't conduct policy training or monitor internal messages can be putting themselves at risk. In 2003, oil company Chevron USA paid $2.2 million to settle a sexual harassment lawsuit over its e-mail content. The allegations were made by a group of women employees who alleged a Chevron subsidiary allowed its internal e-mail system to be used to transmit sexually offensive messages.

A workforce that is educated about and routinely reminded of your e-mail policy is the first line of defense for your company. People who see the policy flashed on the screen during logon are more likely to comply with your rules. What's more, in the event of a lawsuit or criminal activity, a company that can demonstrate its allegiance to policy and training could be treated favorably by the courts.

An employee of American Family Insurance was found to be receiving child pornography on his company computer. The company was not held liable for the employee's action because it could prove that it has an active policy against such use of the computer. In order for the employee to gain access to his company network, he had to acknowledge the policy as part of the logon process. Unfortunately for him, he ignored the policy and got caught.

So employers, whether your company is large, small or in between, don't feel guilty about taking a peek at what's flowing through your network; it is your right and responsibility. If you shut your eyes to potential problems, even larger problems could arise.

Musthaler is vice president of Currid & Company, a Houston technology assessment firm. She can be reached at linda@currid.com.

Companies that don't conduct policy training or that don't monitor internal messages can be putting themselves at risk.

Network World 1/9/06

Addressing the problem:

Quick. How many IP addresses are you managing? When was the last time you checked to see if all the IP addresses were being used? And do you have an automated system for managing IP address changes? IP address management is taking on greater importance for a number of reasons. In this Technology Insider, we'll lay out the problem and describe how your peers are handling it.

Lucent wins Clear Choice Test:

We tested three enterprise-ready IP address management tools, and Lucent's VitalQIP wins our Clear Choice Award for its fast performance, scalability, feature-rich options for dealing with IP addresses. Page 44.

Crunching the numbers

IP address management comes to the forefront as IT shops work to deliver more services and ensure their networks remain available and secure.

BY DENISE DUBIE

Will McGregor isn't an accountant, but still his job requires that he keep tabs on 20,000 numbers at once.

As a LAN network and security team member for Reuters in London, the numbers McGregor monitors are IP addresses, which represent more than 10,000 servers and network devices. According to McGregor, if the numbers don't match, customers simply don't get the IP services or applications they've requested from the media giant's network.

"You can't have any IP address conflicts because the IP services will eventually stop working. The routers won't know where to pass the packets to next, and that would be a complete disaster," he says. "IP address management is absolutely critical, and it just keeps getting more complex."

IP address management, the practice of maintaining an up-to-date repository of all IP addresses within any given network, historically has involved manual inventories and Excel-like spreadsheets that could be updated when new devices were added. But, according to Forrester Research, 25% of companies surveyed have moved beyond those rudimentary methods to internally developed apps. Another 20% use third-party tools to ease IP address management.

Several factors are driving IP address management from the back burner to a more prominent place on the IT to-do list.

- Data center consolidation is sending more LAN

See Numbers, page 42

"USC is a big network, with about 65,000 addresses across 200 locations . . . without managing them, it would get pretty messy very quickly."

JAMES WIEDEL, DIRECTOR OF NETWORKING, UNIVERSITY OF SOUTHERN CALIFORNIA

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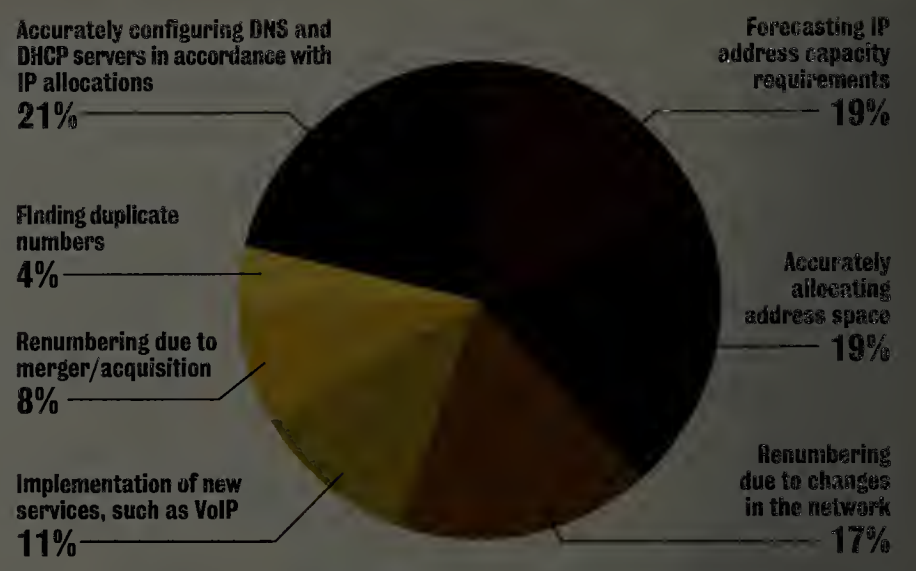
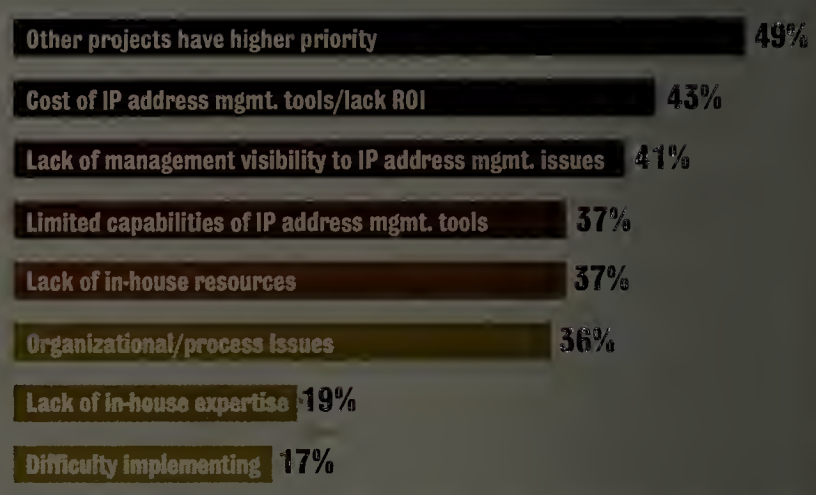
Address overload

About 190 IT professionals surveyed report IP address management poses multiple challenges for network managers.



IP management roadblocks

Respondents said there are technical and cultural barriers to improving IP address management in their organization.



SOURCE: INS, APRIL 2005

Numbers

continued form page 40

applications over the Internet, which is driving efforts to better manage IP addresses within IT shops.

- VoIP, by making phones an IP device, potentially doubles the number of IP addresses.
- Security concerns in terms of network access and potential virus infection from unknown devices are forcing companies to better manage network access.
- The demand to deliver QoS and applications to end users is pushing IT managers to more closely monitor IP addresses.

"We used to have lots of disparate networks, subnets, small groups of servers, and it wasn't organized, but now we're centrally managing it all at this data center," McGregor says. "It's a much more complex map of what is there and what needs to talk to each other, to the Internet and to servers on the other side of the Internet."

A number of vendors, including Cisco, Incognito, INS, Lucent, MetaInfo, Nominum, Nortel and AppliantSys, are shipping tools to help network managers maintain an inventory of the IP addresses in their network, subnets, virtual LANs and more. Using either software installed on a server or bundled on an appliance, IP address management products are designed to keep an up-to-date inventory of the network addresses in use. Some products simply serve as a repository for data that must be manually updated by network engineers, while other products claim to dynamically discover new devices, collect IP address information from them and ensure there is no duplication.

"The evolution and adoption of IP address management processes and tools has taken much longer than one would expect," says Thomas Mendel, a principal analyst with Forrester. "There will be a significant uptake in this area in 2005 and 2006 because IT managers have to continue to deliver services as the number of addresses escalates. Products can help."

IP by the numbers

An IP address has two parts, the identifier of the network and an identifier of the device, so a complete IP address needs both the unique network number and host number. "Like a post office, you look at the ZIP code first, not the local address. In a network, get the packet close to the destination based on a summarized route and let the local routers deliver it," says one network manager at a healthcare provider in New York. "IP address management significantly reduces management and troubleshooting time by being able to quickly look at problems and immediately know where to look."

But IP management is more than tracking numbers; it also requires matching and passing numbers out to users via DNS and DHCP. DNS serves as a phone book of sorts, matching up numbers with names. For example, a DNS server would align the names of objects, such as a server, into the numeric IP address associated with the name. And a DHCP server is used to automatically assign TCP/IP settings to clients. IP addresses come from a pool defined in the DHCP server's database, and the server grants the IP address for a specified amount of time, called a lease.

According to a recent INS survey of some 190 IT professionals, as the need for IP address management continues to grow so does the complexity of IP networks (see graphic). The survey revealed that not only does managing thousands of IP addresses pose multiple challenges to network managers, but also the cost and complexity of putting vendor products in place represents a barrier to more than 40% of IT shops surveyed. Close to 50% of respondents also said other IT projects take priority over IP address management.

USC remains old school

"USC is a big network, with about 65,000 addresses that are not all located in one building, but across 200 locations," says James Wiedel, director of networking at the University of Southern California in Los Angeles. "So without managing them, it would get pretty messy very quickly."

The practice of doling out IP addresses within a specific range, ensuring there is no duplication, timing out addresses for temporary use and simply keeping track of thousands of devices has always been important. But in essence, as networks grow more complex and more companies deliver IP services over the Internet, the demands of IP address management will overwhelm network engineers in charge of keeping traffic flowing to and from multiple addresses.

Wiedel uses the old-school system of spreadsheets to keep track of IP addresses, but says he still runs into problems, such as timed-out addresses. He explains that being a university his team often allocates addresses, but isn't aware of when those addresses become unused.

"We, as a central administration, do not find out that the old machine is permanently gone from the network until we look for [media access control] addresses that haven't been used in months," he says. "We are in the process of revamping our network with a new range of IP addresses and are planning to find nice big holes in the old range that can ultimately be collected and reused."

Representatives from Nortel and MetaInfo say vendor products also can keep a tally of timed-out addresses, as Wiedel detailed, to ensure "chunks of addresses don't go unused." The vendors also can help IT shops manage DNS and DHCP servers, in relation to IP address management.

Reuters opts for Optivity

Unlike Wiedel, Reuters' McGregor depends upon vendor tools to manage IP addresses. He uses Nortel's Optivity NetID to stay on top of addresses, but says he will be requesting more auto-discovery capabilities and intelligent correlation. For example, one server could have four interfaces, which requires four IP addresses. Currently, McGregor must manually enter duplicate information, such as the machine location, serial number and so on, for each interface. He says the practice is time-consuming and represents more opportunities for errors.

"I'd like to see more automation in the product. Right now, it prompts me for the same information that I already entered under a different IP address. To me, that makes too much room for error," McGregor says. "I'd also like to see a 'manager of managers' and decide if Reuters should continue to manage its IP addresses regionally or if we should install a global system."

Forrester's Mendel agrees. He says vendor tools simply don't measure up to enterprise company requirements.

"A lot of the technology out there is 10 to 15 years old, and many enterprise companies don't have proper processes in place," Mendel says

Vendors need to incorporate auto-discovery features, Mendel says, to ensure the repetitive data entry that McGregor mentions doesn't result in errors and ultimately routing failures. According to Forrester, 15% of overall downtime in companies is caused by network problems. The research firm attributes the majority of that time to manual errors in configuring and changing DNS and DHCP servers.

While vendors work on their wares, Mendel advises IT managers to take a look at their processes to ensure they have a proper handle on IP address management. He says the growing adoption of the best practices in the Information Technology Infrastructure Library will help, Reuters' McGregor agrees.

"To really get the most of out vendor products, network managers have to plan the use of their address space really well in advance. There has to be an idea of having contiguous address space for your network," he says. ■

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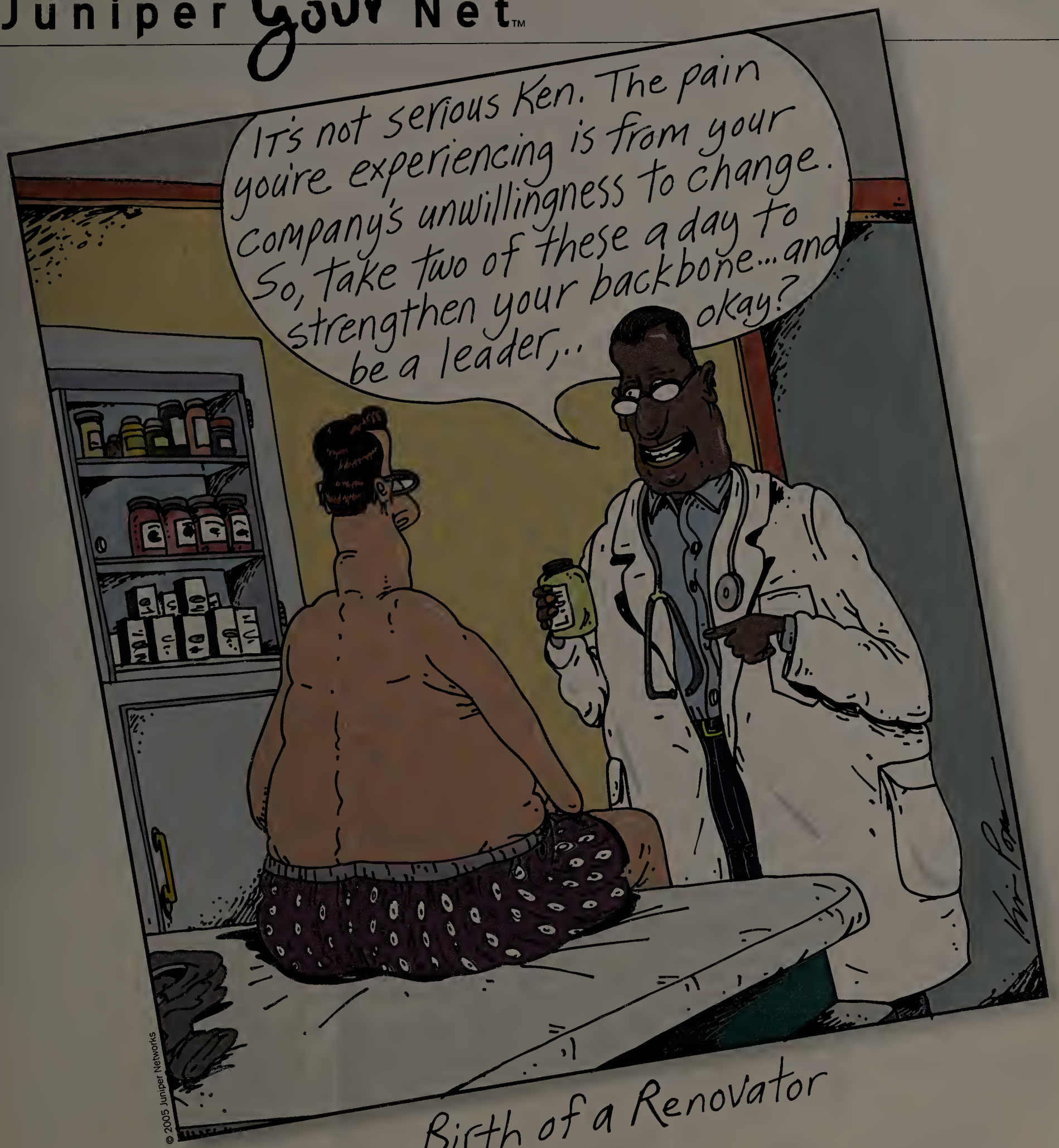

Birth of a Renovator

>> Juniper Networks would like to congratulate all the participants of the first annual **Network World Renovator Awards.** Winning *Renovators* displayed an ingenious understanding of technology – proving a business case for a network-wide renovation, while creating striking new business opportunities.

Now, good luck to those leading the charge for the '06 awards.

CLEAR CHOICE TEST

Lucent edges MetaInfo in IP address management test

VitalQIP is fast and scalable, Meta IP offers security and useful reports and ApplianSys' DNSBox 300 is an easy-to-deploy plug-and-play device.

■ BY BARRY NANCE, NETWORK WORLD LAB ALLIANCE

When your company's IP address list begins to rival the Manhattan phone book, it's time for a serious IP address management tool. Dealing with a growing and rapidly changing population of IP addresses is a tedious and dismal chore, especially if you're assigning client addresses with the old-fashioned static IP address approach, using a spreadsheet or piece of paper, or if you're manually juggling multiple Domain Name Server and Dynamic Host Configuration Protocol servers to track and lease addresses.

DNS and DHCP services included with Windows Server 2000 or 2003 are an option, but you might need better performance (quicker DHCP IP address lease responses and DNS name resolutions than Windows delivers) or higher security. For example, Windows DNS services don't support encrypted zone transfer and update features like most non-Windows DNS server products do.

We invited several IP address management tools to our Alabama lab for testing. MetaInfo (Meta IP Enterprise 5.6 and SA-500 DNS/DHCP appliance), ApplianSys (DNSBox 300 and DNSBox 100) and Lucent

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Net Results

Lucent VitalQIP 6.1 (SPI) — 4.3

Company: Lucent, www.lucent.com **Cost:** From $0.70 to $5.00 per node. **Pros:** Fast, scalable; intuitive interface. **Cons:** No IPv6 support yet; no Linux GUI.

MetaInfo Meta IP 5.6 — 4.2

Company: MetaInfo, www.metainfo.com **Cost:** $75,000 for Enterprise 50k Bundle (two Manager Servers, 10 DNS Servers, 10 DHCP Servers and 50,000 IP addresses). **Pros:** Good security; flexible IP address management. **Con:** SA 500 appliance should have two hot-swappable power supplies.

ApplianSys DNSBox 300/100 — 3.4

Company: ApplianSys, www.appliansys.com **Cost:** $10,950 for the DNS-Box 300 and $2,950 for the DNSBox 100. **Pros:** Simple, straightforward plug-and-play devices with a browser-based interface. **Con:** Appliances should have two hot-swappable power supplies.

The breakdown	VitalQIP	Meta IP	DNSBox
Performance 20%	5	4	3
IP address management 20%	4	4	3
Ease of use 20%	4	4	3
Scalability 10%	5	4	4
Security 10%	4	5	4
Installation 10%	3	4	5
Documentation 10%	5	5	3
TOTAL SCORE	4.3	4.2	3.4

Scoring Key: 5: Exceptional; 4: Very good; 3: Average; 2: Below average; 1: Consistently subpar

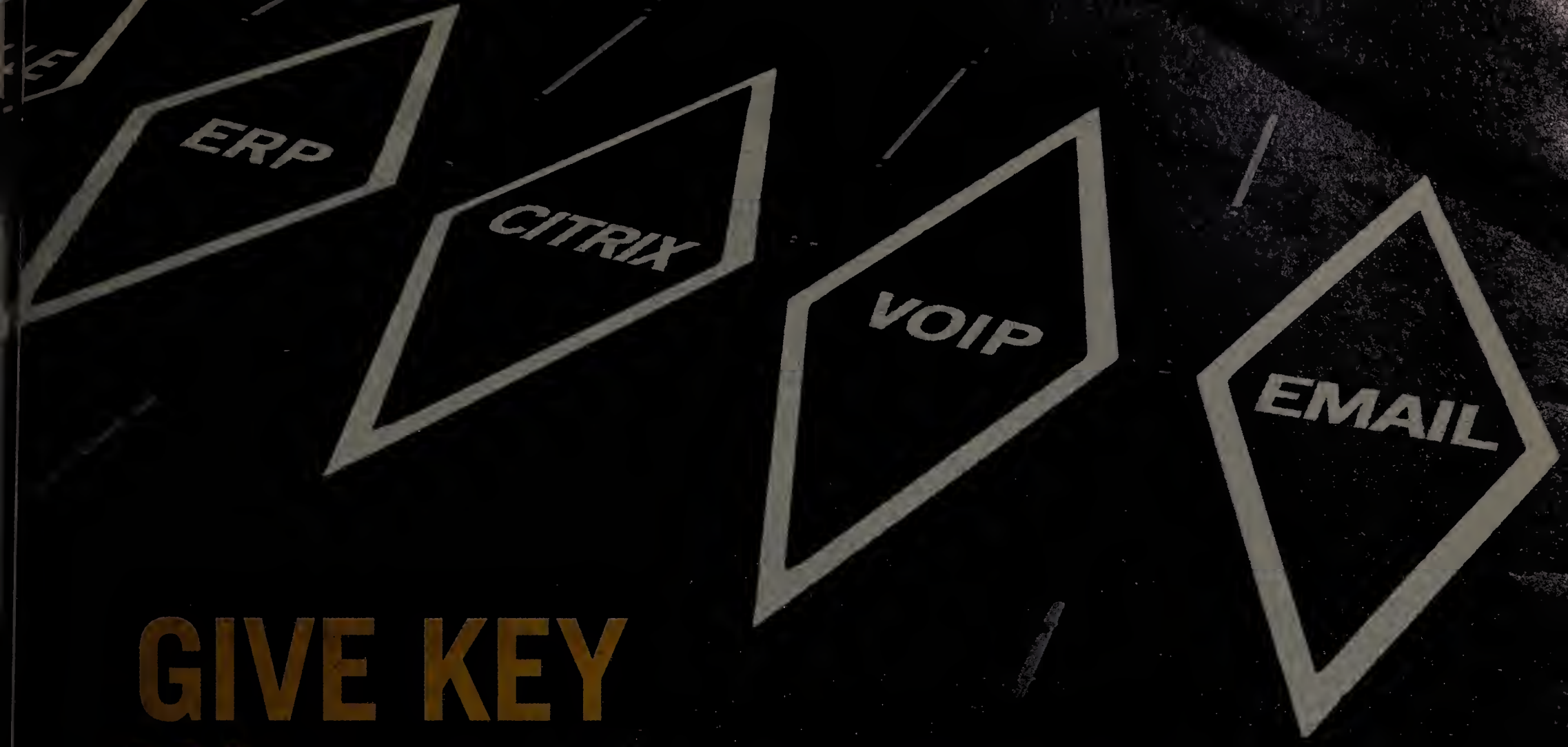
Appliance factor

The ApplianSys DNSBox appliance offers easier installation and maintenance.

MetaInfo and Lucent offer a software-only central console and the other components in either appliance or software form. The ApplianSys DNSBox product is appliance-only. Appliances are naturally easier to install and can be easier to maintain, especially at remote locations. The software-based approach can be attractive if you have servers with spare capacity to run DNS/DHCP services.

A DNS/DHCP network appliance might perform faster or slower than your own hardware, depending on the vendor's design and what computers you have available for running the software. Reliability also is a major consideration when buying appliances. For example, the DNSBox systems are Linux-based appliances that boot and run from a pair of Compact Flash cards rather than a disk drive. With no moving parts and no alterable or deletable operating system files, a CF card boot enhances reliability. Performance-wise, the DNSBox 300 contains a 1-GHz Pentium III processor, 512M bytes of RAM and a 10/100M bit/sec Ethernet port. The DNSBox 100 has a 1.7-GHz Celeron processor with 512M-bytes of PC2100 DDR memory and a 10/100 Ethernet port.

— Barry Nance



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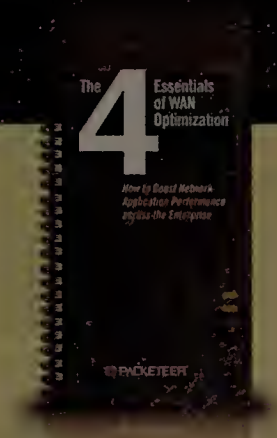

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IP

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(VitalQIP 6.1 with Service Pack 1) accepted our invitations. Other vendors declined to have their products evaluated (see How we did it, below).

Our tests aimed to find a tool that could flexibly and efficiently assign IP addresses to all our IP devices, centrally manage all the address information across a corporation, quickly and effortlessly equate host names with IP addresses, scale well, be intuitive to use and be pervasively platform-neutral. The tool also should have useful reports and integrate with custom-written applications, cooperate with Active Directory, be Lightweight Directory Access Protocol (LDAP)-aware and robustly deal with badly formed or non-compliant DHCP requests. The system also needed to be highly fault-tolerant and enforce security to help keep hackers at bay.

Lucent's VitalQIP wins our Clear Choice Award, but just by a whisker. VitalQIP gave us fast performance, scalability, feature-rich options for dealing with IP addresses and an intuitive user interface. The software is an enterprise-ready tool to organize and manage virtually any set of IP addresses, no matter how large or complex. MetaInfo's Meta IP Enterprise has excellent security and reporting features, while ApplianSys' DNSBox units are easily installed plug-and-play DNS/DHCP appliances.

IP Management 101

We were highly impressed with VitalQIP's ability to discover, manage and administer a complete picture of IP addresses across an entire corporate infrastructure, including all the DNS, BOOTP and DHCP servers across all networks and subnets. VitalQIP maintained a device profile for every IP address and accurately tracked the status of each address — such as used, unused, reserved, pending a move or available.

VitalQIP includes an enterprise server, remote server, Web client interface, GUI client and distributed services. It works with either a Sybase or Oracle relational database to store the IP address data, configuration settings and event data. Lucent bundles Sybase Adaptive Server with VitalQIP.

Like VitalQIP, Meta IP shows IP devices and addresses in expandable tree form.

The remote server component includes a DHCP server, DNS server, Microsoft DHCP support, IBM DHCP support and a DNS update service. Unlike Meta IP, the product does not yet support IPv6.

The system's IP Node Discovery feature did a credible and accurate job of surveying our network to locate and identify ranges of IP addresses currently in use. Running in the background unobtrusively, IP Node Discovery on a large network can even reveal the use of IP address ranges you didn't even know were on your network. When we configured VitalQIP to integrate with Active Directory, it found our Active Directory tree, and thereafter it quietly but effectively kept Active Directory aware of our IP addressing schemes and assignments.

We liked that VitalQIP and Meta IP support the relatively recent updates to RFCs 3396 (Long Options Support), 3442 (Classless Static Route Option) and 3397 (Domain Search). VitalQIP also supports DHCP Option 82 information.

Meta IP uses a three-tier architecture of a management console, manager server and BIND-based DNS/DHCP services. The management console provides the user interface, and the manager server is Meta IP's LDAP-based repository for IP address configuration data and address pools. In our tests, the manager server and DNS/DHCP services ran on the SA-500 appliance, while the management console ran on Win 2000 Advanced Server. MetaInfo says these functions also can run on Windows and Unix.

To enhance uptime and availability, one SA-500 can be primary and the other can act as a secondary failover device. Both the SA-500 and DNSBox models are 1U rack-mounted with single power supplies, potentially a point of failure. We feel these should have dual, hot-swappable power supplies to eliminate this failure point.

The Meta IP DNS service closely integrates with Microsoft Active Directory. In one of our tests, we used the Windows Active Directory wizard to easily and painlessly link a domain controller to Meta IP, create forward master zones and create optional slave zones. In the resulting configuration, Meta IP controlled and directed DNS operations across a company con-

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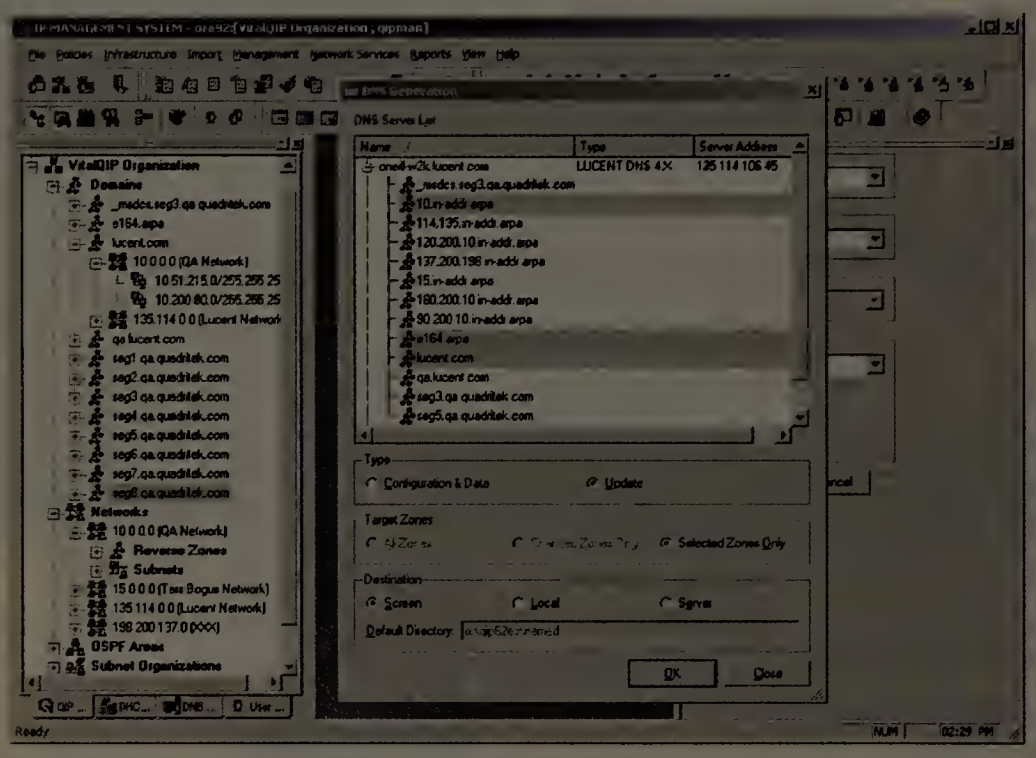

VitalQIP's native client GUI makes organizing and administering IP addresses a painless process.

How We Did It

Our test environment consisted of six routed Fast Ethernet subnet domains and a T1 Internet connection. The Internet link let us perform massive zone transfers and other large-scale IP address operations, but most of our testing was local.

We ran VitalQIP and the Meta IP management console on a four-way Compaq ProLiant ML570 700 MHz computer with Pentium III CPUs, 2G-bytes of RAM and six 18G-byte SCSI RAID drives. The operating system was Windows 2000 Advanced Server with Service Pack 4. MetaInfo sent us an SA-500 DNS/DHCP appliance, while ApplianSys shipped both a DNSBox 300 DNS/DHCP Master and a DNSBox 100 DNS Slave appliance.

Each subnet's 25 client computers were a mix of Win 2000 Professional, NT Workstation 4.0, Windows 98, Windows ME, Windows XP, Red Hat Linux 7.0 and Macintosh platforms. The relational databases on the network were Oracle 8i, Sybase Adaptive Server 11.5 and Microsoft SQL Server 2000. Win 2000 and NetWare 5.1 shared files, while Internet Information Server, Netscape and Apache software served up Web pages. An Agilent Advisor protocol analyzer decoded and displayed network traffic.

We tested each product's ability to dynamically distribute IP addresses, equate IP addresses to host names, register IP addresses in directory/name resolution services and maintain a repository of IP addresses and host names. We also looked for scalability, security, ease of use and task automation.

To simulate a high volume of DNS/DHCP requests, we ran several concurrent instances of a C++ program that issued both valid and invalid DHCP-DISCOVER messages. To test performance, we measured how quickly each DHCP server responded to 50,000 IP address requests. We also moved clients from one subnet to another, gave unique values to the DHCP client ID field and assigned different values to the user class ID and vendor class ID DHCP parameters to see how the DHCP servers responded.

We invited all major vendors with IP address management products to participate in the test. Cisco, Nortel, Nominum, Incognito, EfficientIP, BlueCat, Infoblox and Process Software either declined or did not respond to our invitation.

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taining both SA-500-based and Windows-based DNS services. In addition, we found the RFC-compliant Meta IP, VitalQIP and DNSBox units interoperated well with each other.

Meta IP's Secure Address Foundation Extensions (SAFE) DHCP feature was particularly useful for clients outside a private network (for example, the Internet) that need to send IP address requests to your DHCP servers. Your company's mobile clients, such as PDAs and notebooks, are examples of devices for which your network has to sometimes play the role of ISP.

The SAFE feature evaluates client media access control addresses or DHCP Unique Client IDs to distinguish between known, authorized clients and other clients. For example, if a stranger asks for a company's IP addresses, Meta IP leases to it an IP address from a separate pool. Depending on how you set up the pools of IP addresses, SAFE DHCP can help control or limit access to portions of your network.

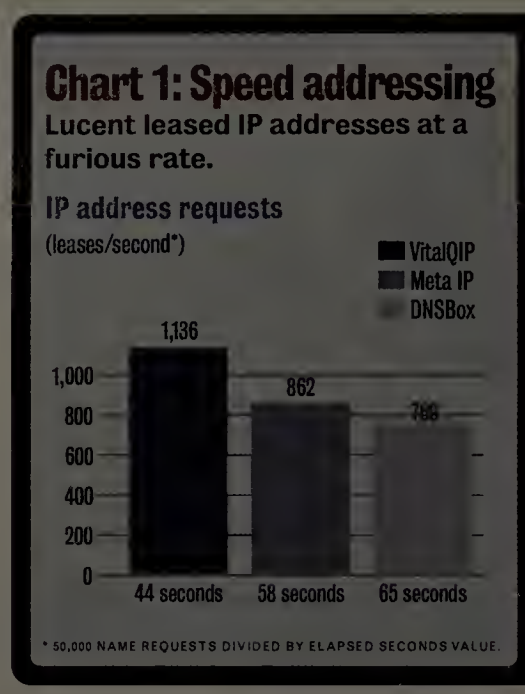
Meta IP also uses Perfigo's SecureSmart manager to identify DHCP clients and runs anti-virus scans to verify that a client's configuration conforms to corporate standards. If you need extra security, Meta IP can use an Authenex ASAS Server or a Check Point UserAuthority server to authenticate users at initial network access via a password.

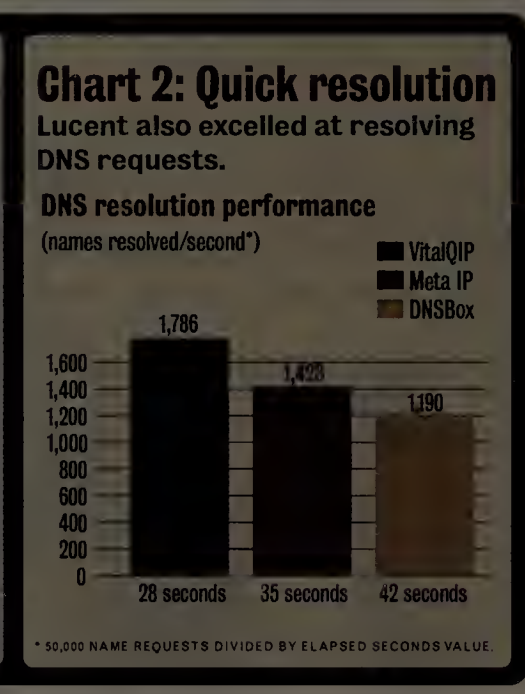
ApplianSys' DNSBox 300 (master) and DNSBox 100 (slave) together are a complete, if simple, DNS/DHCP environment more appropriate for small to midsize companies. Where VitalQIP and Meta IP are software-only or a combination of software/hardware, the DNSBoxes are pure plug-and-play network appliances.

The DNSBox 300 includes a Nixu NameSurfer DNS management system, while the DNSBox 100 runs a BIND V9 server executable. The DNSBox 300 supports multiple DNS views, dynamic DNS, automatic zone slaving, secure incremental zone transfers and zone and host templates. It integrated well with Microsoft's Active Directory, replicated data to a warm-standby second DNS 300 for failover, supported IPv6 and accurately detected duplicate names and IP addresses. The DNSBox 100 contained a recursive resolver DNS cache, used IPSec (with public/private keys and RSA authentication) to connect to other DNS servers, acted as a DHCP relay, issued SNMP alerts and had a DNS cache query tool for troubleshooting "stale cache" problems. Together the two boxes performed zone transfers and updates through a secure VPN tunnel, which results in a higher level of security than offered by BIND 9's Transaction Signature facility. In addition, the appliances have a built-in firewall to lower your company's exposure to hackers.

Performance and scalability

We measured performance by running custom client software that rapidly requests 50,000 dynamic IP addresses and noting the elapsed time that each tool took to respond. We ran the program six times, one test on each network segment in our lab (see Chart 1). We also benchmarked DNS activity. Our test software issued a flood of 50,000 name-to-IP address resolution requests, and obtained responses from a DNS server (see Chart 2, below).





Results show clearly that VitalQIP was the fastest tool, but both VitalQIP and Meta IP have the capacity and speed to handle millions of IP addresses with ease. We feel that the DNSBoxes are more appropriate for smaller networks.

Platform support might be a major factor in what you buy for your company's computing environment. VitalQIP runs on Sun Solaris, HP-UX, AIX, and Win 2000 and 2003. Its DNS/DHCP server component also is available on a network appliance. Currently only the command-line interface is available on Red Hat Linux, but Lucent says the GUI will be available on Linux by mid-2005. Meta IP's server components run on Solaris, Red Hat Linux, Debian, SuSE and Windows NT, XP, 2000 and 2003. The Meta IP management console runs only on Windows.

Ease of use

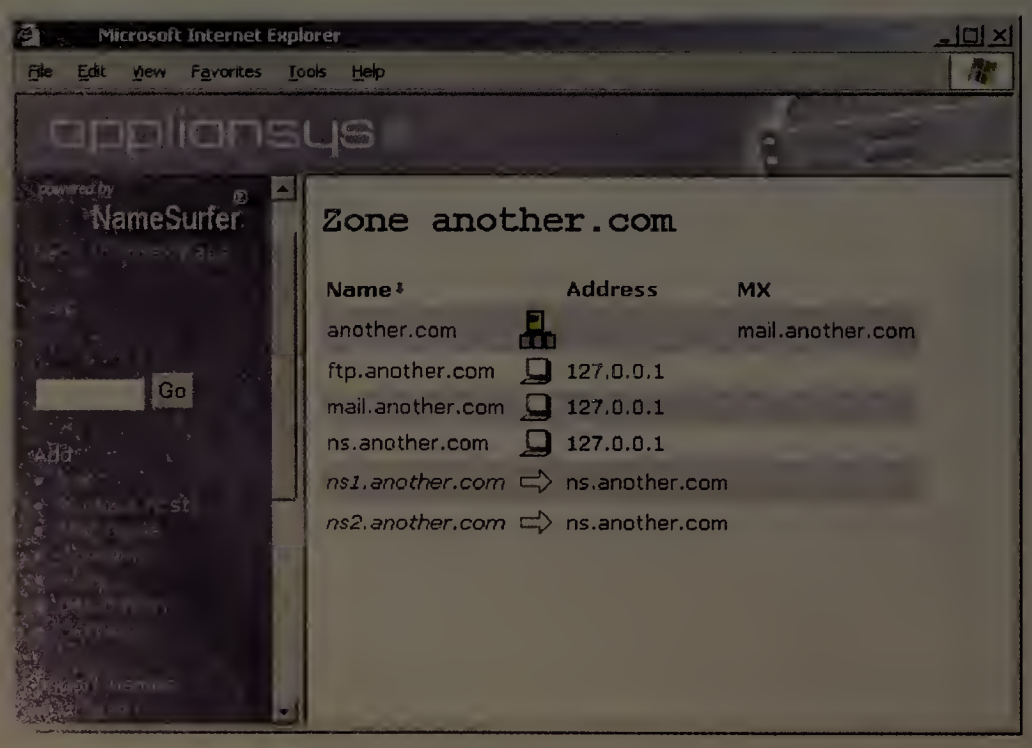
VitalQIP offers an easy-to-navigate GUI client for Windows and Unix, even sporting a prompt-based interface for command-line devotees. The Web client interface, which includes a set of Common Gateway Interface scripts, supplies a few basic administrative functions and a basic system status display in a browser window. You will need to use the GUI or CLI clients for most VitalQIP tasks. Documentation, which consists of three books and sizable online help files, was clear and comprehensive.

We also found Meta IP's native Windows interface intuitive and productive. In addition to its IP address organization and assignment modules, Meta IP includes configuration analysis tools that display reports showing DNS services and zones, as well as DHCP lease pool data. The tools include a DNS IP troubleshooting function, DNS zone configuration display, static lease compliance analysis, DHCP discovery report, lease pool usage display, available address ping sweep, lease reclaimer and user data report. We found scheduling and customizing the Meta IP reports a simple and straightforward process. MetaInfo provided excellent printed and online documentation.

In contrast to VitalQIP and Meta IP, the DNSBox 300 appliance gives you browser-based full administrative control over DNS and DHCP functions. When we installed the appliances, configuring the 300 and 100's own IP addresses and subnet mask was done via serial-port-based telnet. Optionally connecting through a virtual terminal revealed detailed appliance behavior in the form of syslog entries. The DNSBox Web interface was a simple, menu-driven set of HTML and Javascript pages to configure the servers, get a summary of DNS/DHCP activity, change the password, view online help and perform backup and restore functions. The printed documentation consisted of some "getting started" steps and a rudimentary usage tutorial. Almost all of the adequate (but obviously not professionally written) DNSBox documentation is available only in HTML. The DNSBox 300 Web interface uses SSL and passwords for security. It supports multiple concurrent administrators and has a read-only mode so non-administrative users can view DNS/DHCP activity, although we're at a loss to imagine why anyone would use this feature.

A handy delegation feature lets a supervisor administrator assign responsibility for particular domains and subnets to different users.

Nance runs Network Testing Labs and is the author of Introduction to Networking, 4th Edition *and* Client/Server LAN Programming. *He can be reached at barryn@erols.com.*



The ApplianSys browser-based interface is simple but effective.

NW Lab Alliance

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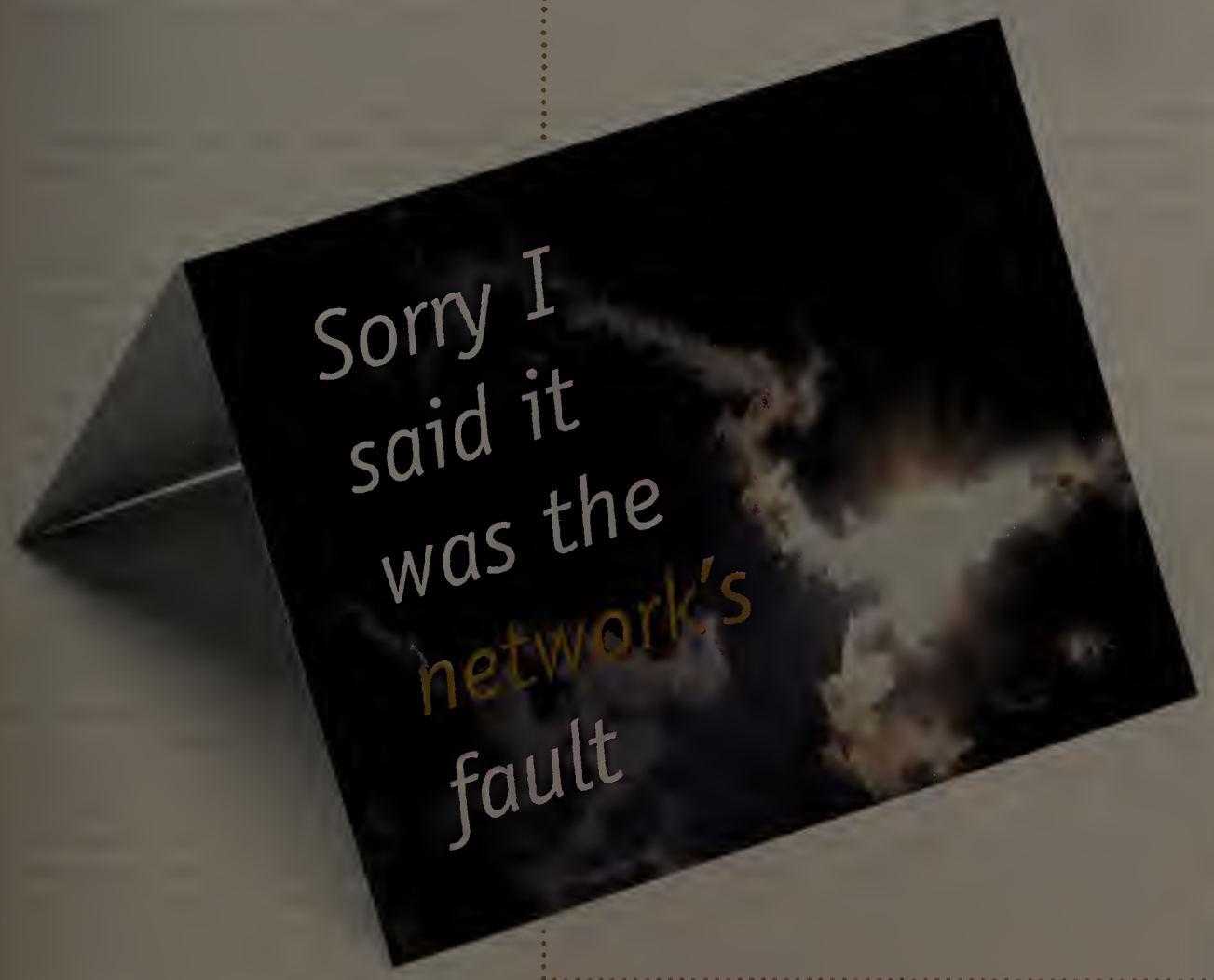

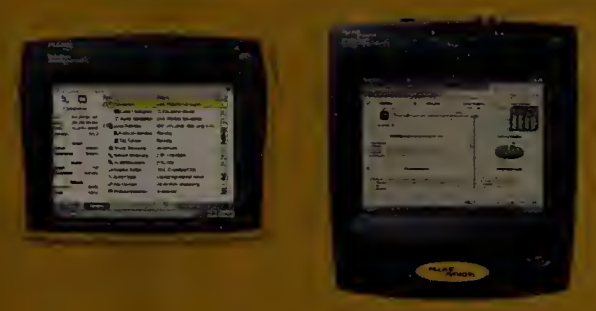

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Automatic server provisioning: Essential, yet lacking

BY ANDREAS ANTONOPOULOS

Next-generation data centers are supposed to be hotbeds of automation with on-demand everything. In this ideal, system administrators are almost obsolete, and the data center runs "by itself."

Operating systems are composed of thousands of components with tight bindings and a maze of interdependencies. These components may have a different management interface. In this environment, it is difficult to create an automated provisioning and deployment tool that works consistently.

Fortunately, all operating system vendors have identified provisioning as a key operational headache for their customers and have been building increasingly sophisticated tools to reduce the time and effort needed to deploy a server. Also, several vendors have extended the basic operating system tools, turning them into sophisticated provisioning tools.

There are two general approaches to server provisioning: imaging and scripting. With imaging, a server or an application component backs up to a "gold" image, which can be reproduced on a target server. Because the image is restored in one go, this process can be fast, lasting only a few minutes. Scripting deploys the software using the standard installation process, with the administrator's manual input automatically recorded and replayed for every installation. Because this process uses the generic installation program designed to provide myriad configurations, it is a slower process. The resulting installation may require additional updates and patches. Though slower, the scripting method provides more fine-grained control over each configuration.

In practice, most provisioning systems combine both methods into a hybrid approach.

Yet a third approach is to extend the imaging method by storing a gold image and "deltas" for each desired configuration. The deltas are the differences between the desired build and the base image. This approach allows administrators to have hundreds of virtual images without having to store hundreds of large baselines.

The greatest remaining hurdle is that provisioning systems are neither comprehensive nor interoperable. This leaves administrators in the position of using multiple systems that don't talk to each other. The DCML and OGSA standards are solutions to the interoperability problem, but vendors have been slow to adopt them.

Automatic provisioning has a long way to go to reach the operator-less data center. Products such as Microsoft's Provisioning System, Automatic Deployment Services and Sysprep, Veritas' OpForce, IBM's ThinkDynamics, Sun's CenterRun, HPs Novadigm and Levanta for Linux all point to a more automated and efficient data center.

Antonopoulos is principal research analyst at Nemertes Research. He can be reached at:andreas@nemertes.com.

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Vendor vetting

When it comes to choosing network products, customer references can be an information gold mine.

■ BY JOHN COX

Some network executives either overlook or don't make the most of a key resource in evaluating IT products and services: the customers that are already using them.

Schon Crouse, PC support analyst with Children's Hospital in Columbus, Ohio, knows exactly how valuable vendor reference checking can be. He's currently evaluating two software vendors, PDADefense and Extended Systems, for client/server security software that will be loaded on to handheld devices, including smartphones, used by hospital staff. The Health Insurance Portability and Accountability Act regulations mandate that the devices lock down the instant they're shut off, which requires the user to key in a password to turn them on again.

Crouse was quizzing an Extended Systems customer who stunned him with an issue that had never been voiced. "The customer told me this: 'When the smartphone locks, does it let me answer an incoming call automatically or do I have to key in the password?'" he recalls. "I never even thought of that. He said that was one of their biggest issues."

He says the answer was that Extended Systems lets you receive calls without entering the password, but to make calls you have to unlock the smartphone. PDADefense requires users to key in the password before doing either.

While customer references are routinely requested from vendors bidding on a project, using them effectively requires planning, shrewdness and perseverance.

"In my experience, the mind-set of customers often is that reference-checking is the last thing you do before you sign on the dotted line," says Kendall Messick, a senior consultant with International Computer Negotiations, which specializes in training clients to hammer more advantageous and less risky deals with IT vendors.

Reference checking is like mining: knowing where and what to look for, being sensitive to the lay of the land, and using the right tools. Questions cover product details but also how reliable the vendor is with delivery, customer service metrics, and even the experience and performance of people on the vendor's account team.

Vendors only will give the names of customers they are certain will give a positive endorsement, Messick says. "But, that said, if the reference check occurs at the right time [in the procurement process] and is done by the right person who knows what they're doing, they can get a lot of information," he adds.

Ask for former customers as references, advises Sam Barton, contracts manager for Toyota Motor Sales USA. "In many instances, we've asked them to give us one or two former customers who have stopped the service [or product] for whatever reasons, pleasant or unpleasant," he says.

In large companies, purchasing decisions typically are quarterbacked by a group of procurement professionals. At Toyota Motor Sales, the IT group coordinates IT purchases. In either case, an interdisciplinary team, including IT staff, shepherds the process from initial requirements to contract signing.

"Our IT department is shoulder to shoulder with our supply-chain department on all these deals," says Jeff Rolsten, executive director of supply-chain services for BellSouth in Atlanta. "I can only get so far with technology, and then I need someone who really knows that stuff."

Consistency is key

That kind of cooperation is especially important in drafting the right set of questions, and then asking the same questions of each customer reference. "With the same questions and the same phrasing, you can get consistent responses," Messick says. "You want comparable information."

BellSouth routinely quizzes customer references for up to 30 minutes with questions that focus on several key areas: problem solving, communications, customer focus and price/cost. Although asking references what they paid for a product is verboten, Rolsten says they can find out if the vendor shows initiative in helping to hold down costs, pass along savings and work with customers on such matters.

Rolsten recommends using two people on these calls: a questioner and a note taker. The questions vary depending on what the product or service is. "With as many systems as we have, a typical request is 'Can you ask them how it interfaces with Company X's software?'" Rolsten says. "Or, 'How does it run on one platform compared to another platform?'"

Children's Hospital's Crouse asked his customer references for the handheld security software how easy it is to install the software on their computers, how easy it is to update or patch, and then after the update, what additional work, if any, needs to be done on the client device.

Toyota's Barton starts out with high-level questions, looks to establish rapport with the reference and then works down to greater levels of detail. "We might start by asking 'What did you bring this vendor in to do?'" he says. "Then, 'Was this a deliverables-based project or time-and-materials?' 'Did they deliver on time? Were you satisfied?' You start drilling down into the things that you want this same vendor to do for you."

He adds that his company prefers to speak to the people who are implementing the product and working with it on a day-to-day basis as opposed to management.

Finding the right people makes it easier to establish rapport and therefore easier to get to a conversation that's respectfully frank. "We might want a vendor to meet service-level agreements (SLA) and then meet remedies if they don't," Barton says. "So we might ask a reference, 'Do you have SLAs? Did you ever have to invoke a remedy?' They might reply, 'Yeah, once or twice.' You get to see where there might have been hiccups."

Those hiccups don't mean you disqualify the vendor. But they become part of the final negotiations, so you can mitigate risks. If the vendor has been late with deliveries or consistently missed one part of an SLA, the contract negotiations can focus on providing additional protections for your company. ■

Asking the right questions

Quizzing customer references provides insight about their experiences with a particular vendor's product. To do the job well, formulate queries that:

- Are consistent.
- Cover the specifics of the product or service you're evaluating.
- Explore support, SLA and relationship issues.
- Seek examples that illustrate the reference's comments and claims.

A sampling of queries:

- What prompted your decision to select [vendor name]? Did you evaluate and consider competitive options at the time? If so, which options?
- Please provide a brief synopsis of your implementation with [vendor name] from both a functional and a technical perspective. (i.e. operations system[s]? platform[s]? technologies used? transaction volumes, etc.)
- Did the product meet your expectations for functionality and reliability?
- What has been the biggest challenge you have faced working with [vendor name]?
- Has [vendor name] consistently met the SLAs set forth in your contract? If not, what has caused the deficiency? What steps has the vendor taken to improve performance?
- In reflecting on your experience working with [vendor name], what would you have done differently or what would you change?
- You have communicated that you highly recommend [vendor name]. Could you give me a few examples or share a couple of stories to help me understand why you feel the way you do?

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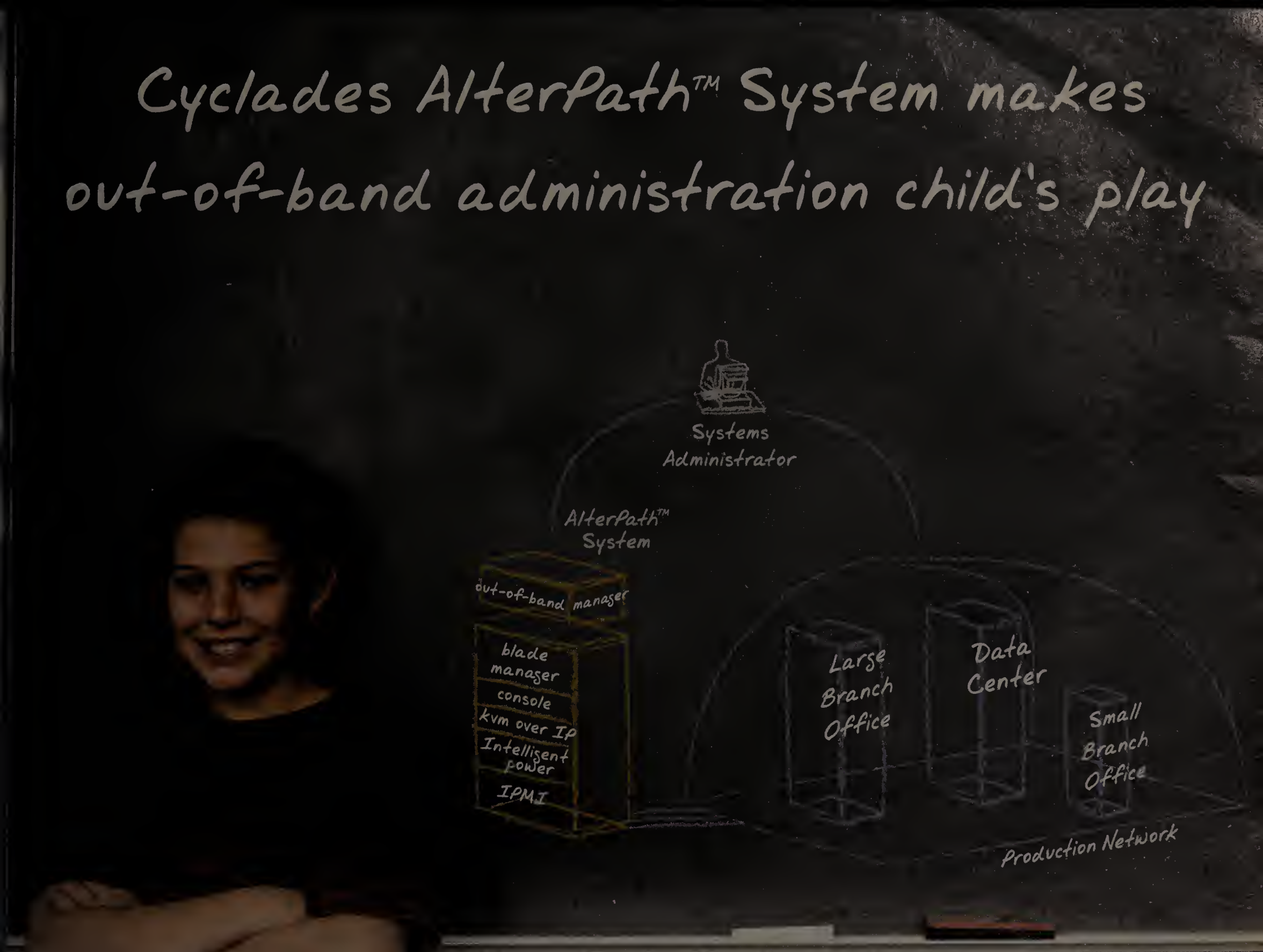

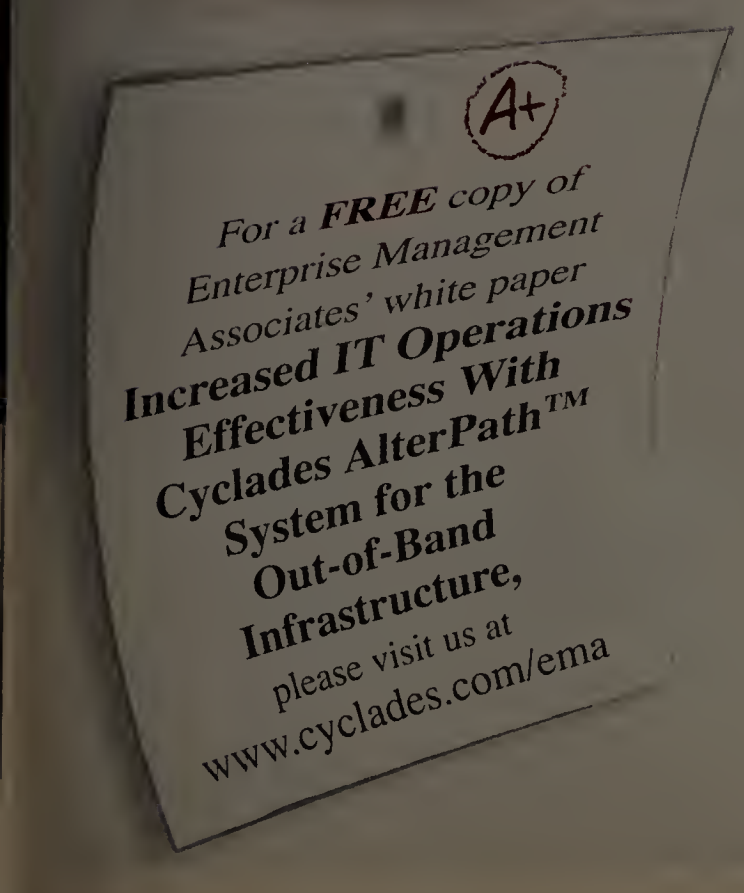

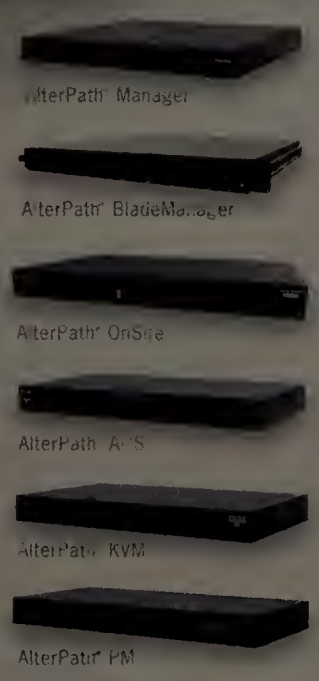

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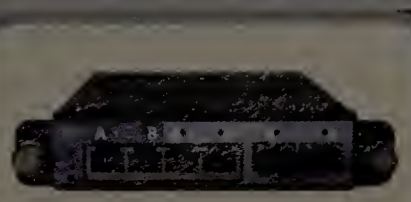

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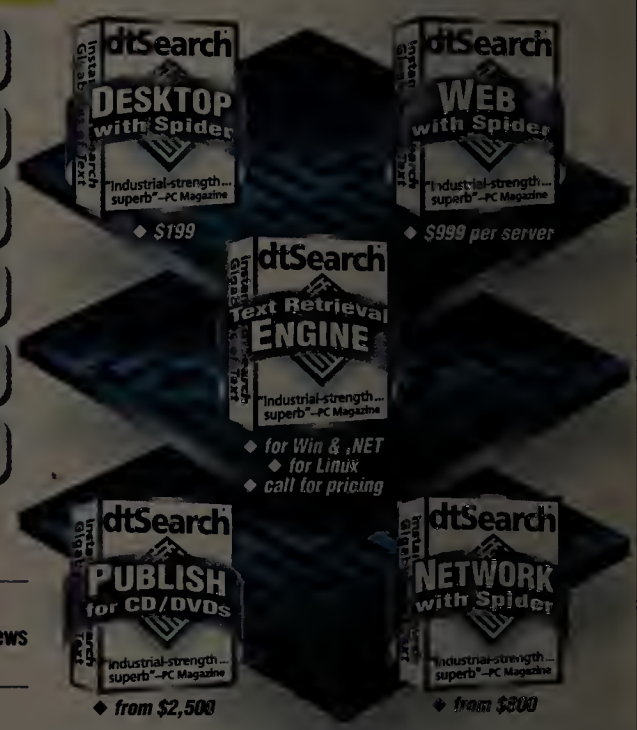

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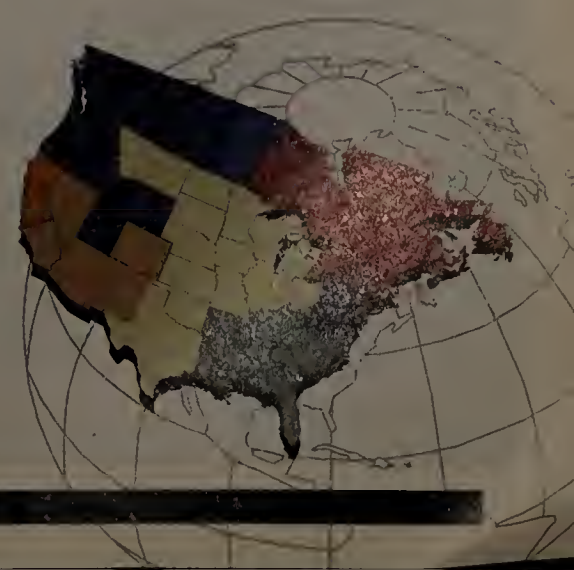

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HP

continued from page 1

revenue fell 6.3% from 2003 to 2004.

At its StorageWorks user conference in Las Vegas, HP is expected to roll out:

- Three new models of its midrange Enterprise Virtual Array (EVA) — the EVA40000, 6000 and 8000 external disk storage systems.
- A series of appliances that speed data access and file sharing between remote offices and the data center.
- A clustered gateway product for consolidating file services in remote offices back into the data center.
- A virtual tape library for open systems — Windows, Unix and Linux — environments that lets IT use disk to emulate tape backup.

The launch of the new EVAs, the StorageWorks Enterprise File Services (EFS) and the virtual tape library will make for a much more comprehensive storage portfolio.

The refresh of HP's EVA products has been much anticipated. It will fill out HP's family of midsize enterprise storage arrays and offer midsize companies a scalable choice for storage. While HP declined to comment on the new EVAs or any of the other products it will announce, documents downloaded from HP's Web site detail the capabilities.

"HP is making a comeback in storage," says Arun Taneja, founder and senior analyst for Taneja Group. "These announcements bring HP a heck of a lot closer to competing with EMC and Network Appliance."

According to IDC, in 2004 EMC took the No. 1 position away from HP for external disk storage systems. EMC showed a 21.1% revenue share, followed by HP with 18.7%.

The EVA4000 has a maximum capacity of 16.8T bytes; the EVA6000 scales to 33.6T bytes; and the EVA8000 has a maximum capacity of 72T bytes using 240 drives, twice the capacity of HP's previous StorageWorks EVA5000. The EVA8000 supports connections to as many as 256 servers.

In addition, the EVA8000 is more than twice as fast as the EVA6000. The storage arrays can intermix fast Fibre Channel and less-expensive and lower-cost Fibre Channel drives.

All boxes now support industry-standard multi-path I/O for Windows, Solaris, AIX, NetWare and Linux rather than HP's proprietary SecurePath technology. Multi-path I/O is the ability to use more than one physical path to access the storage device, providing fault tolerance and load-balancing of storage traffic.

HP's new product barrage also will focus on hot topics such as clustered file systems, wide-area file services (WAFS) for branch-office consolidation and the acceleration of chatty file services protocols across the WAN. WAFS systems converge remote-office and data center storage and reduce the latency of file sharing imposed by WAN connections.

By compressing data and using other techniques, WAFS makes response times LAN-like.

To provide WAFS to branch offices, many of which are without IT expertise, HP is using WAN Accelerator technology from Riverbed. The HP EFS WAN Accelerators join a market being targeted by Cisco (with its acquisition of Actona) and Brocade (in a partnership with Tacit Networks).

Ronald Godine, manager of information systems operations for Royal Appliance in Glenwillow, Ohio, is looking at WAFS products for its China operation.

lin the past, we've flown CDs to our China office and FTP'd information, but we need real-time access to the data," he says.

The EFS WAN Accelerators are HP ProLiant server-based and could reduce WAN traffic by 60% to 95%, according to a document downloaded from HP's site.

"While over a LAN you have immediate performance, across a WAN you will notice huge differences in performance," Godine says. "WAFS has the potential to reduce that."

In an agreement with file-sharing cluster vendor PolyServe, HP is also launching the StorageWorks EFS Clustered Gateway. The gateway allows for as many as 16 nodes — ProLiant servers — in a single cluster and supports a common file system of as large as 16T bytes. The EFS Gateways support Unix/Linux Network File System files and use SuSE Linux Enterprise Server. Because the cluster is symmetrical, any node can back up others in the cluster, thus providing data protection.

Finally, the StorageWorks virtual tape implementation also fills a gap in the company's storage systems strategy. Virtual tape, which has become a popular technology since the introduction of EMC's Clariion Disk Library and Network Appliance's acquisition of Alacritus, is a capability every storage vendor is getting into in some way. ■

NetBuzz
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Printed on white vinyl the size of a drink coaster, the pitch read: "This probably isn't the best place to sell you penis enlargement. Neither is your e-mail. We take care of that." We in this case would be the folks at MailFrontier.

Another educational session attempted to answer the question: "WiMAX: The Next Big Thing?" On the panel were representatives from six vendors — Intel, Qualcomm, Sprint, 3Com, AirTight Networks and Alvarion — all of which have some stake in the matter. To say they're bullish might be the safest bet in Vegas.

The group's rough consensus? Fixed WiMAX will be a slam-dunk in broadband-poor locales and for certain urban uses, while the ultimate embrace of mobile WiMAX remains a bit more of an open question.

Jeff Belk, a Qualcomm marketing executive, came closest to offering a genuinely discouraging word: "You're not going to go from standardization to millions of units without going through the kinds of painful steps that every other wireless technology has gone through."

AT&T technology guru Hossein Eslambolchi loves WiMAX, too, and he just can't say enough good things about IP, in general. For example, there's his oft-repeated contention that "IP will eat everything," which he repeated once again during his Interop keynote address. Eslambolchi also told an anecdote about VoIP sparing Martha Stewart the indignity of a Virginia telephone exchange by bringing her tony 212 New York number to her since-vacated jail cell.

Who had the biggest booth with the fewest visitors? That looked to be MCI's ghost town. Completely unfounded, though, were rumors that the booth had been physically seized by Qwest CEO Richard Notebaert.

And then there was this bit of unexpected advice: A 3Com presenter bid farewell to his assembled audience by urging them to "have a safe show." . . . I guess it really is a jungle out there.

Did anyone find the shirt I lost in Vegas? If so, the address is buzz@nww.com.

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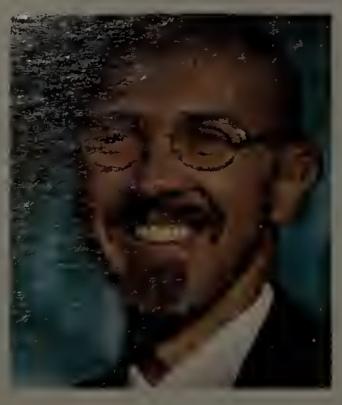

Betting on the future

I just bet Dean Drako, the CEO of anti-spyware/spam vendor Barracuda Networks, $5 that within five years all of our important network connections will be made over secure connections. Dean disagrees. He thinks it will take longer than that.

The issue came up last week when we were discussing spyware at Interop in Las Vegas — Drako's company will incorporate spyware detection in its anti-spam firewall products — and I contend that the spyware problem is growing at a pace that exceeds the rise of any previous threat. It will make spam and viruses look, at best, second-rate threats and cause lost productivity on a scale so great that we will have to change the way we communicate.

My argument is founded on the fact that spyware already has become a huge problem. Depending on whose figures you believe, spyware is installed on 60% to 70% of all corporate PCs and is responsible for at least half of all PC crashes and about one-fifth of all support calls.

If you haven't experienced the joys of spyware, just wait, you will. I've been wrestling with spyware on my laptop on and off for the last couple of months. On start-up, an Internet Explorer window pops up on top of every other window titled "My Search Page," and it is very hard to kill off. Until you click on a link, you can't escape it, and after you do, you will be subjected to pop-up ads every few minutes. I've run every spyware tool I can find to try to remove or at least identify the software, but so far no luck. Any advice you might have would be interesting.

The fact that spyware already is a major headache was obvious at Interop — the number of vendors with anti-spyware products was remarkable, and along with wireless technology it was one of the show's biggest themes.

New answers

I saw several interesting anti-spyware products. AbsoluteSafe from start-up Zeroday Security is a small box that is connected to your PC by a USB cable and features a single switch and a red light. When the red light is on, your PC is protected and no software can be added to the system. Flip the switch, your PC can be updated. The hardware won't be available until later this summer and don't bother looking at its Web site (www.zerodaysecurity.com) for a while because not only is the site awful, it tells you less than I just did.

While AbsoluteSafe is targeted at individual PCs, SecureWave has an enterprise anti-spyware product now available for Windows. The product, called Sanctuary Application Control, uses kernel-level drivers to intercept application loading and performs an SHA checksum on the code. It then compares that checksum with a list of all known code and if the software can't be identified, it prevents the software from running. SecureWave told me they already are making large sales to government agencies.

A third company of interest was RealBlocker, another start-up without a useful Web site (www.realblocker.com). It is demonstrating an interesting-looking, appliance-based system called RealBlocker that can detect and block spyware on the wire as it crosses your network, and block access to Web sites that are known spyware sources.

So how bad is the whole spyware thing going to get? Really bad. When I wrote earlier in the year about an Internet catastrophe, this is the kind of thing that could well make that prediction come true. But there is a positive side to this — we're going to be pushed into taking action. Authenticated e-mail will become mandatory. Servers of all kinds will only talk over secure connections. And I will be $5 better off.

What's your bet? Tell me the odds at backspin@gibbs.com.

'NetBuzz News, insights, opinions and oddities

By Paul McNamara

A string of Interop moments

Heard — and overheard — at last week's Interop conference in Las Vegas:

John Chambers is no Bono, notwithstanding his being introduced as the network industry's answer to the U2 frontman. (For one thing, it's impossible to imagine Cisco's CEO dropping an F-bomb on national TV.) But Chambers does possess a compelling stage presence, which was on full display as he preached the gospel according to Cisco during the show's kickoff address.

"Everyone here wants to talk about technology," Chambers said on one of his numerous forays out into the audience, which even included a rather risky leap off the stage. "But what will cause people to spend money is improving their entertainment, their healthcare or their business productivity."

And golly-gosh if it isn't Cisco technology that will, in his estimation, bring about those improvements.

Like many practiced public speakers, Chambers leans a bit too heavily on favored rhetorical devices. For example, he used this phrase on at least six occasions after laying out a premise: "You know where I'm headed with this."

You did know, too, although Chambers is apparently convinced that such is not always the case with Cisco customers. As a result, his company is about to become more of an open book, he promised.

"We're going to start sharing with you more and more of where we're headed" with product road maps. "You will see us be more open on where we are in market share."

I half expected the crowd to start singing "Beautiful Day."

No one would dare to compare Scott Kriens to a rock star, but that wasn't going stop the Juniper CEO from beating a drum for his company during a keynote address that opened Day Two of the conference.

Kriens as a keynoter might best be described as articulate and earnest, which is a polite way of saying he's no ball of fire.

"What is the industry doing? Is it consolidating?" he asked rhetorically. "My answer is yes and no."

What he meant was that the answer is really yes, but that doesn't mean you should buy all your stuff from Cisco.

Blaring U2 music at the close of his address was a nice dig at Chambers, though.

Equivocation was not an issue during an educational session about spam.

"Users are stupid," said Mirapoint product manager John Veizades. His proof — not that anyone in the audience was demanding any — is a recent study showing that 10% of e-mail users actually have bought goods or services offered through spam. In other words, we all know people who've done it, and that's sad.

In addition to a dearth of common sense, a lack of effective e-mail authentication is undermining anti-spam efforts. To illustrate the point, VeriSign principal scientist Phillip Hallam-Baker told a tale of his two telephones that before the institution of the do-not-call list received an unwanted solicitation "only about once a fortnight." One phone number he placed on the list; the other was left unprotected. The first gets no junk calls now, and the second gets about three a day. His point: E-mail desperately needs its own Caller ID.

Also desperately needed is more discretion by cell phone users.

"It's an extremely hard thing to prove that our box caused their downtime," said one indiscreet user within my earshot.

The man wasn't suggesting that the cause of the downtime was any mystery to him. He was merely taking comfort in the idea that the uncertainty of others would be his friend. Had I seen his conference badge, you might all know the vendor's name right now.

Getting your name known — in a good way — is Job One for vendors at Interop. Banners and posters are plastered over every inch of the convention center. One marketing message even stared up at me from, of all places, the top of a urinal.

See 'NetBuzz, page 60

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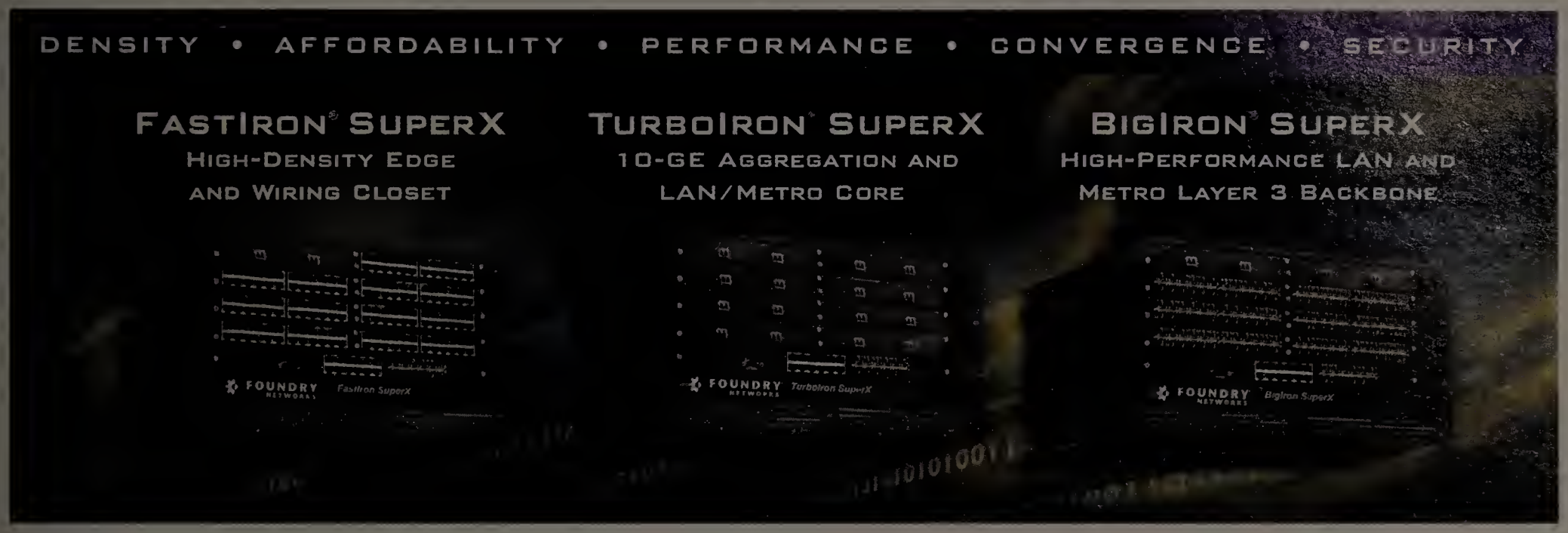

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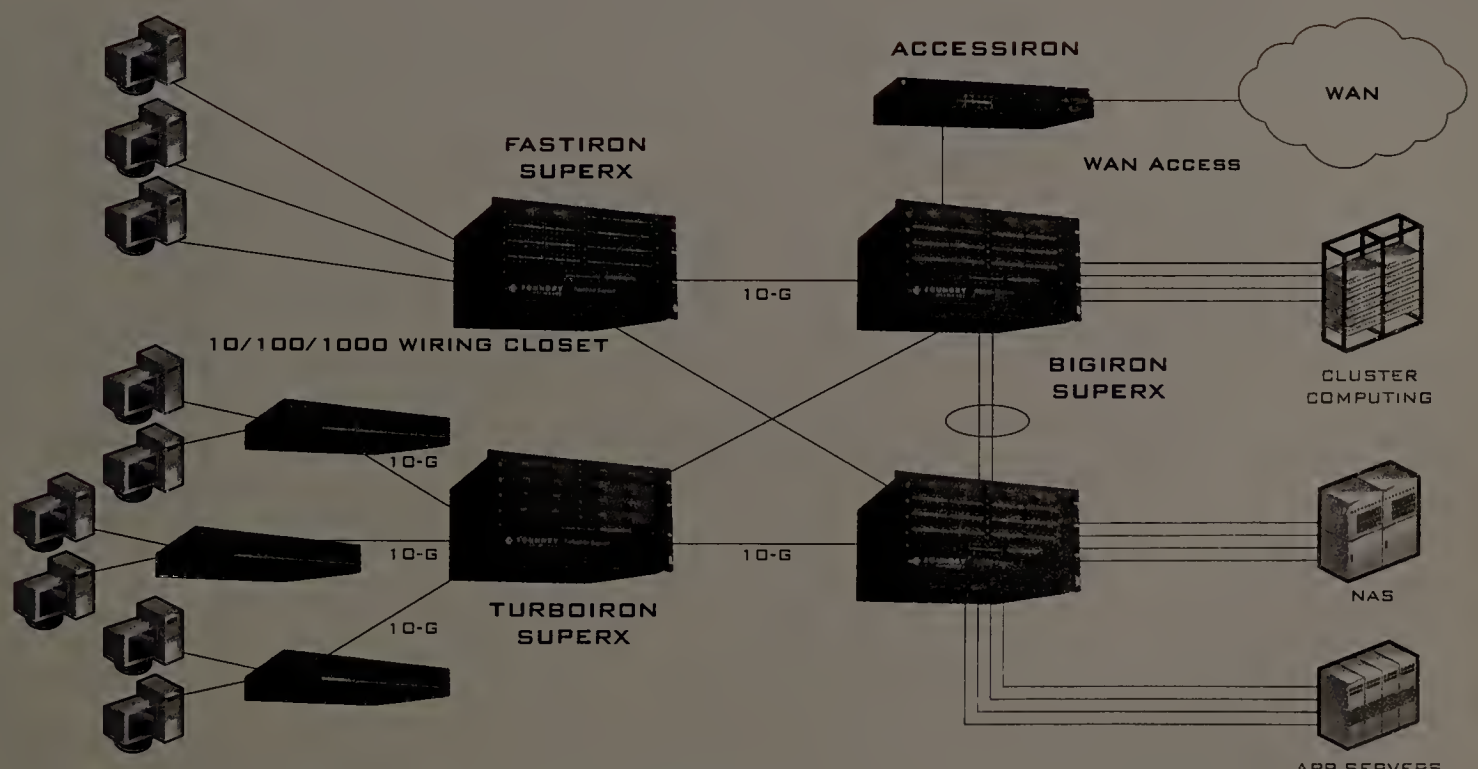

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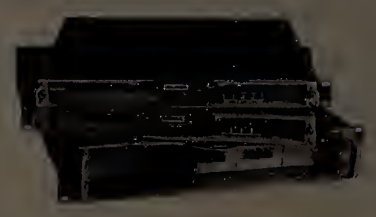

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